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Problems of Economics

ВОПРОСЫ ЭКОНОМИКИ

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The Triumph of the Theory of Scientific Communism

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Some Problems of the Further Development of the Kolkhoz Regime

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Bourgeois Economists on Soviet Industry

When Wishes Are Accepted As Reality

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PROBLEMS OF ECONOMICS

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ditorial:

or A Great Upsurge of the Chemistry Industry

The Communist Party, struggling for the fulfillment of the storical decisions of the 20th Congress of the CPSU, has rried out extensive work for the development of industry d agriculture, for strengthening the economic power of the viet Union and for the constant growth of the people's wel-re. The completed overhauling of the system of industrial d construction management resulted in a spur to the initia-e of all local organs in the field of economic construction, sured the more active participation of millions of workers production management and revealed additional reserves the growth of production.

The functioning of industry has considerably improved. e plan of industrial production for 1957 was overfulfilled. e plan for the gross product in the first quarter of the rrent year for the entire country was fulfilled by 104% and dustrial production was 11% higher than production for the me period of 1957. The record achievements of our sci-ce in theory and technological application are known to the ole world. The new successes achieved by the Soviet ion are convincing proof of the basic, indisputable superi-ity of socialism over capitalism.

At all stages of socialist construction our party and its ntral Committee steadfastly followed Lenin's course of eferential development of heavy industry which forms the sis of our country's development. In heavy industry, in ience and in technology we have reached a level at which, thout detriment to the continued preferential development heavy industry and the defense capabilities of our country, can increase the production of mass consumption goods a much more rapid rate and in the next five or six years tisfy the demand of the population for fabrics, clothing, otwear, and other goods. A further development of the emical industry — one of the key branches of heavy in-stry — is of great importance for the solution of this oblem.

The founders of Marxism repeatedly emphasized the eat role of the chemistry and chemical industry in the de-lopment of industry. "Each conquest in the field of chem-ry not only multiplies the number of useful substances but so the number of useful applications of already known sub-nces, causing in this way, parallel to the growth of capi-, an expansion of its sphere of application." So wrote rx when he analyzed the transformation of surplus value o capital. "The progress of chemistry shows us how to ng the waste products of production and consumption back o the process of reproduction and in this way creates the ostance for new capital without preliminary expenditure capital." ("Capital," Vol. I, 1954, pp. 610-611.) Outlining remarkable plan of building socialism in our country, nin, as early as 1918, wrote that the growth of labor pro-citivity requires above all ensuring the material base of ge-scale industry: the development of fuel and iron pro-ction, of machine building and the chemical industry. nin's grandiose plan of electrification foresaw a substan-l growth of the chemical industry.

The chemical industry during the period of Soviet power developed in the USSR much more rapidly than industry as a whole and than the production of the means of production. By 1957 the volume of gross chemical industry production increased, compared with the 1913 level, 112 times and, compared with the prewar level, five times. Now the USSR occupies second place in the world in the volume of chemical-products. However, the achieved level of production and the rate of development of the chemical industry, especially in the production of synthetic materials, is not sufficient for the increased needs of the economy. We have to admit that the part of the chemical industry in the branch structure of industry as a whole is still relatively small and even some-what decreased during the Fifth Five-Year Plan. For ex-ample, the part of the chemical industry in the basic funds of all industry has fallen from seven per cent in 1940 to five per cent in 1954. Moreover, unequal development of some branches of the chemical industry brought about some dis-proportions. The volume of production of plastic materials, of synthetic rubber, man-made and synthetic fibers, mineral fertilizers and various other products of the chemical indus-try was not sufficient.

At the Plenum of the CC, CPSU, which took place in May, 1958, Comrade N. S. Khrushchev made a report. After the discussion of this report the Plenum passed a resolution "concerning acceleration of the development of the chemical industry and especially production of synthetic materials and goods for the satisfaction of the needs of the population and the needs of the economy." This decision is a new strik-ing proof of the care of the CP for the welfare of the people and for the improvement of their living conditions. The ple-num decided to approve measures worked out by the pre-sidium of the CC, CPSU, and the Council of Ministers, USSR, and outlined in Comrade N. S. Khrushchev's report, for the acceleration of the development of the chemical industry and especially for the increase of production of man-made and synthetic fibers, plastics and other synthetic materials and goods made of them for the satisfaction of the needs of the population and industry. The decisions foresaw a two to three-fold growth of production of the most important chem-ical products between 1959 and 1965 and of production of man-made and synthetic fibers and plastic materials of 4.5 to 8 times.

The production and wide use of synthetic fibers, which find various applications in modern industry, including the electrical industry, is of great importance for the economy. The fact that the production of synthetic fibers requires less social labor than that of natural ones is of great significance. Thus, production of one ton of cotton requires 238 man days, of scoured wool — 624 man days, of flax — 463, of staple fibers only about 70 man days.

On the basis of the envisaged increase and improvement in the production of synthetic materials, and artificial and synthetic fibers, it is planned to produce in 1965 500 million meters of woolen fabrics, almost 1,500 million meters of silk fabrics, about 500 million meters of cotton and man-made and synthetic fabrics, about 940 million pieces of

knitted goods, five million square meters of artificial Astrakhan fur and more than 500 million pairs of footwear. Through an uninterrupted growth of textile raw materials from agriculture and a great development of the synthetic materials industry it is expected to raise the production of fabrics to 56 meters per capita by 1965. Thus in eight years, between 1958 and 1965, the production of all fabrics, including the materials for knitted goods, will increase by 17 meters per capita, while in the preceding 44 years (between 1913 and 1957) it increased only by 20 meters per capita.

For the realization of this grandiose program of forced development of the chemical industry between 1958 and 1965 it is necessary to build and reconstruct 257 enterprises of the chemical and kindred branches of industry, of which 120 will be newly built and brought into operation. In order to ensure the accelerated development of the chemical industry more than 100 billion rubles will be invested in it.

In connection with such a large volume of capital investment the increase in its economic effectivity is of special importance. The economists have to find a scientific, detailed definition of economic effectiveness in its application to chemical materials, products, and processes and above all to the key branches of the economy. Thus, taking into consideration the size and the scale of housing construction in the Soviet Union, we may assume that the application of various kinds of plastic materials in construction will help to economize tens of billions of rubles, will lower the expenditure of labor in the production of construction details and their assembly and will improve the quality of the finish.

Research concerning the economic reasons for the application of new technique and chemical products and the working out of a method of economic calculation for finding the optimum variant among progressive technological processes is extremely important. It is known that larger technological installations produce large economic results. This may be seen from a comparison of data for the installation of the vacuum refining of petroleum:

	Annual capacity of installation (million tons)		
	0.5	1.0	2.0
Capital expenditures, million rubles	12.6	18.6	24.2
Number of workers	21	31	41
Relative capital investment per ton of processed petroleum during the year (in rubles)	25.2	18.6	12.1

As we see, the relative capital investment in the processing of petroleum in larger installations is reduced by more than half. The selection of the economically more advantageous variant of the construction plan should also be rational from the point of view of the plant's location. For example, the best location of the new enterprises for the production of synthetic fibers, plastic materials, rubber, and a number of other chemical products and materials is evidently in petroleum-producing areas, in the areas of well-developed petroleum refining and also in the areas where the chemical industry is well-developed. This will make it possible to use more fully and in a more complex way such very valuable and inexpensive raw materials as natural gas, and gases obtained in petroleum refining as well as products of the coke-chemical and gas-peat-oil shale industri

In order to carry out this broad program of constructio of chemical plants for the production and processing of s thetic materials and the timely start of their operations, considerable increase in the production of chemical technological and auxiliary equipment is required. The produ tion of steel fittings, the shortage of which is limiting the opening of chemical and other enterprises should be shar ly increased, namely from eight to nine times. It is nece sary to say in this connection that it is time to change the existing procedure of planning and control of the producti of steel fittings and equipment for the branches of the che ical industry in terms of weight. Such a procedure does n stimulate the increase of production, the expansion of the assortment and the lowering of production costs.

The well-known classification of the branches of indust prepared by the State Planning Commission of the USSR a the USSR Central Statistical Administration for the practi purposes of planning and statistical control contains unde the heading "Chemical industries proper" only 16 branch and subbranches grouped in a subdivision "Mining-chemi and Chemical Industry" and only two branches of this are further subdivided into subbranches. Because of the grea expansion of the chemical industry we may expect its fur ther division into branches and subbranches. This proces should find proper reflection in the classification of the branches of the chemical industry. This would improve planning for these branches and the control of their varie products.

Working out a new, more detailed classification of che ical industry branches is also very important for the pre ration of new standards of depreciation, differentiated by dividual branches. The structure of the basic funds in va ous branches of the chemical industry is not similar. Fo example, in such branches of industry as those producing nitric acid, synthetic rubber, plastic materials and vario others armed with complex and expensive technological a paratuses, basic funds constitute a relatively great part the total funds. Yet up to now the standards of depreciati applied to them are those of 1930, which are the same fo the whole chemical industry and depend only upon the per centage of functioning capacity and the number of shifts. the volume of capital investment in the chemical industry creases, the importance of this problem will also grow.

Special attention should be paid to the manufacturing o equipment for automating production processes in the ch ical industry. Automation is one of the most important fa tors for technological progress. Similar to electrificatio it makes it possible to reorganize production processes, increase sharply labor productivity, increase labor safet and make labor much less onerous. Together with metall petroleum refineries and other branches, the chemical in try is the branch of the national economy most ready for automation. This is due to the fact that automation has th greatest economic effect in the branches of production wh technical processes are uninterrupted. Moreover the aut mation of the chemical industry is made easier by the fa that its branches have a high level of electrification (its efficient of electrification of power processes is about 9 of capacity). The Plenum of the CC, CPSU, suggested to the USSR Council of Ministers, to the Councils of Minist of the union republics and to the economic councils of the economic-administrative regions to anticipate in their pl of development for the USSR economy for 1959-1965 a sh increase in the production of modern, highly productive equipment and machines as well as gauges, fittings and means of automation for enterprises producing and proc

; chemical products, ensuring that the existing enterprises various branches of machine building produce the neces- ry equipment and that construction of new, specialized achine building plants be expanded. In relation to this a oad program of research should be carried on concerning e economic problems of automation and the determination the objects and products which should be automated ahead others (here we should take into consideration how quick- the capital investment will repay itself and how great the vings would be from the application of automated proc- ses).

The economic analysis of the organizational forms of the odern chemical industry shows that the combining of pro- ction processes in this branch is very effective. If in a rge production combinate the production connections are ranged rationally, then it is possible to apply a combina- n of progressive technological processes which would en- re a complex and full use of the raw and other materials, mifinished products, and power resources. However, estions of combining production processes are still solved practice in an unsatisfactory way, though, after the over- uling of the system of management in industry and con- ruction, the possibilities of concentration in industry have creased greatly.

A substantial reduction of relative capital expenditures hich is caused by the enlargement of the technological in- allations) including expenditures on communications, aux- ary buildings, housing and cultural and communal serv- e construction, etc., is characteristic of concentrated pro- ction. Thus, in the case of combining a group of chemical ants with petroleum refineries (that is, the organization of petroleum-chemical combinate) capital investment in emical products is reduced by about 35 to 40 per cent.

he problem of combining chemical products and in par- cular the problems of the complex use of fuel for the pro- ction of power and chemicals deserves serious attention by r planning organs and needs study and economic research.

The accelerated development of the chemical industry in e USSR will make it possible to solve a very important oblem of the national economy — it will make it possible economize a huge amount of foodstuffs and to increase the oduction of synthetic spirits, synthetic rubber and deter- nts out of petroleum raw materials and natural gases. The oduction of a number of chemical products from raw ma- rials which are not used as foodstuffs is economically ore advantageous. For example, in order to produce one nd of synthetic rubber out of foodstuffs capital investment 70% higher and production three times more expensive an in the case of its production out of gases obtained in troleum refining. Of great importance also is the replace- ent of edible oils and fats as raw materials for the produc- on of soap. Their replacement with fat substitutes and syn- thetic detergents by 1965 would annually save at least 400,- 000 tons of edible oils.

A powerful development of the chemical industry will play an exceptionally great part in the further upsurge of agriculture. Chemical methods applied in agriculture are an important link of technical progress in this branch of the economy. An increase of the role of chemistry in agricultural production presupposes a planned application of chemical processes and products directed at an increase of grain yields and livestock productivity and the growth of labor productivity. Through accelerated development of the chemical industry the supply of mineral fertilizers and chemical insecticides will greatly increase in the next few years. As calculations show, the wide application of mineral fertilizers, for example, in the production of grain, reduces the general expenditure of labor by about 40% and the cost of grain by about 20%. A forced development of the gas industry, which is going on now in the Soviet Union, will make it possible to increase the economic effectiveness of the production of mineral fertilizers. Thus, the construction of a plant for the production of nitrogen fertilizers with an annual capacity of 700,000 tons and the use of natural gas as a raw material instead of coke will reduce the capital investment by about 400 million rubles. This amount will be sufficient to build a plant producing 350,000 tons of nitrogen fertilizers.

The problem of the complex use of raw materials is directly connected with the upsurge of the chemical industry and with the introduction of new processes. The greater application of chemistry in the branches of economy ensures the use of new kinds of raw materials and at the same time contributes to the intensification of material production and its growth. Marx himself stated that as mankind masters more and more chemical methods and reactions, mechanical processing will give place to chemical methods of production. The greater application of chemistry in production is an important link in the chain of technical progress. It helps to economize social labor, to raise the welfare of the people and to expand the assortment of high-quality goods for mass consumption.

The forced development of chemical industry and above all the production of synthetic materials planned by the party is an important factor for accelerating the economic progress of the whole economy, the continued growth of heavy industry and a new great source of raw materials for the production of mass consumption goods. The realization of this vast program of economic construction, which should be the concern of the whole people, will strengthen the economic power of our motherland and will be a great contribution to the solution of the main economic problem of the USSR and to the cause of communist construction.

G. Kozlov:

The Triumph of the Theory of Scientific Communism

Karl Marx, the genius and leader of the proletariat, the founder of scientific communism, the great revolutionary and scientist whose name is connected with the whole history of the struggles and victories of the progressive forces of modern society, was born 140 years ago, on May 5, 1818.

Relying on everything best and progressive that had been created by the human mind in the fields of philosophy, political economy and socialism, Marx made a revolutionary advance in science which constitutes a new epoch in the life of mankind. Marx developed his philosophy on a logical basis and enriched it with dialectics. Having applied philosophical materialism to the field of social relations and discovered historical materialism, Marx was the first to succeed in placing the theory of development of human society on a really scientific basis.

Marx spent the greater part of his scientific activity on the development of economic theory, and having applied dialectical and historical materialism to the analysis of capitalism, he discovered the law of surplus value — the economic law of the movement of the capitalist mode of production.

For the first time socialism was placed on a scientific basis and in this way the working class became armed with the knowledge of the perspective needed in the development of the workers' movement. Marxist teachings united into a single, indissoluble whole the theory and practice of the class struggle.

The most important element in the teachings of Marx is the demonstration of the world historical role of the proletariat as the creator of a new socialist society. On the basis of a penetrating scientific analysis of how the capitalist mode of production developed, Marx showed that the historical mission of the proletariat consisted of liquidation through revolution of the system of wage slavery and the building of a regime based on social property in the means of production freed from antagonistic class contradictions, and ensuring unlimited growth of the productive forces, general prosperity and peaceful collaboration of peoples. Marxist theory is a scientific expression of the interests of the proletariat.

Marx was a great scientist. "But science did not occupy even half of the attention of this man," said Engels. "Science was a revolutionary force for him, one of the mainsprings of history. Every new discovery in some theoretical science, the practical application of which could not yet even be guessed, brought pure joy to Marx. But he experienced quite a different joy when it was a discovery immediately producing a revolutionary influence on industry and historical development in general...because Marx was above all a revolutionary."*

The whole genius of Marx and his boundless energy were completely dedicated to the cause of organization of the proletariat, to its education in class consciousness, to its preparation for decisive battles with capitalism. The image of Marx as a fighter and thinker will live forever in the actions of his disciples and followers.

* Marx and Engels, "Works," Vol. 15, p. 653.

Lenin pointed out that the teachings of Marx were all powerful because they were correct. Analyzing developments after Marx's death — the end of the 19th and beginning of the 20th century — Lenin noted that the course of history was bringing newer and newer confirmation of, an newer success for, Marxian theory. Lenin wrote, "but the coming historical epoch will result in even greater triumph for Marxism as the theory of the proletariat."*

The passing years have fully proved Lenin's prophetic statement. The epoch of social storms and cataclysms which began in 1917, the new page of history which opened with the Great October Socialist Revolution, the victory of socialism in the USSR, the formation of the world-wide system of socialist economy, and the deepening general crisis of capitalism — all these signify a real triumph of Marxis Leninist theory.

***

The victorious road of Marxism-Leninism is a road of unceasing sharp struggle with bourgeois and revisionist theories, with open and hidden foes of the proletariat, and with enemies masquerading as Marxists.

Marxism emerged and was strengthened in the struggle with various forms of utopian, small bourgeois and bourgeois socialism. The victory of Marxist theory found its expression in the appearance of independent political parties of the working class, in the creation of the First International. Proletarian, essentially socialist, parties were formed everywhere at the beginning of the 20th century.

The spread of Marxist ideology among the ranks of the working class and the increase in the number and political influence of Marxist parties are exceptionally important factors in the development of the proletariat's struggle against the bourgeoisie. In search of salvation against the approaching end, the bourgeoisie, paralleling its increase use of political oppression, applied tremendous efforts in order to disarm the proletariat ideologically. Bourgeois theoreticians tried especially hard to refute Marxist economic theory which gives profound reasons for the inevitable replacement of the capitalist mode of production with the socialist mode through revolutionary change.

Bourgeois ideologists began to invent new variants of economic theory, the purpose of which was to prove that capitalism is an eternal and natural form of production corresponding to "human nature." Marxism was attacked by the so-called "historical school" which denied the existence of laws of social development and reduced the role of economic science to a collection of facts only. The "marginal utility" school tried to disprove Marxism by contraposing to objective economic laws discovered by Marx, subjective treatment of value, profit and interest. But all these open apologetic theories could not have a serious influence on the ideology of the working class. While capitalism was in its ascending phase, the representatives of bourgeois economic science maintained that everything was for the best in the bourgeois world. However, the sharpening of social contradictions and the spread of Marxism made impossib

* V. I. Lenin, "Works," Vol. 18, p. 547.

e open defense of capitalism. Only one method of struggle th proletarian ideology and with Marxism was left to the urgeois ideologists — its distortion. In this way revision- n arose.

The enemies of Marxism began to masquerade as Marx- s. The real conductors of bourgeois ideology were oppor- nists inside the working class movement. Seizing leading sitions in the Second International, these opportunists be- n to preach social peace and tried to replace revolution- y Marxism with liberal interpretations of the class strug- e. They based their betrayal of the cause of the working ass on the necessity to "correct" the economic teaching Marx in the light of new historical facts.

The "father" of revisionism Bernstein, tried to prove that ew data" required reexamination of some of Marx's basic eses, that Marx's teaching was in need of "improvement." rnstein and his partisans asserted that capitalism was not veloping in the way Marx had thought it would, that the ncentration of production and substitution of small com- odity production with large-scale production in industry s proceeding very slowly and in general was not observed agriculture, and that economic crises were becoming aker and would be completely prevented from occurring trusts and cartels. Hence the conclusion was reached ncerning the necessity of reexamining the basis of Marx- m, the theory of class struggle, and the dictatorship of the oletariat. The revisionists asserted that bourgeois democ- cy was not a form of rule by the bourgeoisie, but was the le of the majority, that the general election law and bour- ois freedoms destroyed the ground for class struggle.

ch distortions of Marxism under the pretext of its "im- ovement," "additions" of new data, and the like, were and ve remained the main weapons of all kinds of revisionism its struggle with proletarian ideology. All reformists, in- uding the Fabians, continue to consider Bernstein and rnsteinites as their spiritual predecessors.

Already at the beginning of the 20th century the course of ents fully refuted the statements of the opportunists. The pearance of the trusts, cartels, and other monopolistic as- ciations signified the beginning of the process of concen- ation and centralization of capital. As a result of this ocess the main positions in industry have been seized by ew dozens of the largest associations of capitalists who mpletely dominate the millions of small enterprises.

Concentration and centralization of capital went on in agri- lture too, though more slowly. It was accompanied by ueezing out of the pre-capitalist forms of economy and by creasing the layers of the poor and of the agricultural pro- ariat. The crises of 1901 and 1907 and the new economic isis that was gathering momentum on the eve of World ar I showed that the prevention of crises by monopolies — the opportunists asserted was possible — was a fairy e.

The first Russian Revolution of 1905, a number of revolu- nary outbreaks in the countries of Asia, and the sharpen- g of the class struggle in Western Europe showed that the sappearance of class contradictions and class struggle s, in reality, a myth.

The debacle of revisionism and the victory of Marxism nd their best expression in the creation and strengthen- g of the Bolshevik Party, a real revolutionary party of the rking class.

In order to disprove the laws of capitalist development scovered by Marx, the revisionists tried first of all to dermine the Marxian theory of surplus value, which is the rnerstone of Marx's economic theory, which reveals all ntradictions of capitalism and the real essence of class lationships of capitalist society, and exposes relentlessly the political regime and the ideology of capitalism.

The revisionists tried to combine Marx's theory of value with Bohm-Bawerk's subjective theory. But these attempts to move from Marx to Bohm-Bawerk could not contribute anything scientifically. Holding these positions, one could not either explain the new economic phenomena or determine the new tasks in the struggle of the working class. As Lenin wrote, "The most that can be said about the theory of the revisionists following Bohm-Bawerk, is that beside sighs and nebulous allusions, the revisionists did not contribute anything and left no traces in the development of scientific thought."*

A great role in exposing revisionism belongs to V. I. Lenin who developed Marxian theory creatively, gave a comprehensive scientific analysis of the new stage of capitalism of the end of the 19th and the beginning of the 20th century and generalized the new experience of the class struggle. Lenin showed how this theory should be applied to new circumstances.

Lenin began his analysis of imperialism with a generalization of the new facts concerning the concentration and centralization of capitalism in the light of Marxian theory. Even before World War I, in 1912-1914, Lenin showed in a number of articles that the domination of capitalist trusts and cartels mean a further sharpening of conflicting class interests and an unheard of strengthening of capitalist oppression. The events of World War I raised before the working class new tasks and required a comprehensive analysis of the new social phenomena.

The Leninist theory of imperialism is a direct continuation and development of Marx's economic theory. Lenin showed how the economic laws of capitalism, discovered by Marx, are manifested under the new historical conditions. Monopolistic capital is decaying capitalism, capitalism in the last stage of its development. Imperialism is the eve of the socialist revolution. Such was Lenin's main conclusion which determined the tasks of the working class at the new stage of society. Marx's theory, developed by Lenin, armed the working class with a real knowledge of the new conditions of the struggle and prepared it for the storming of capitalism.

Trying to turn the working class away from the path of revolution, opportunists and Kautskyites denied that a new epoch in the development of capitalism had begun, tried to play down the domination of finance, monopoly capital, and limited the term imperialism only to the domination of agrarian countries by industrial capital. Naturally, they then denied the conclusion reached by Lenin on the basis of Marx's theory of concentration and centralization of capital in the light of the new data.

Other leaders of the Second International revised Marxism through changing the very notion of finance capital. For example, Hilferding found the essence of finance capital, not in changes in production or concentration of production, but in changes in the sphere of circulation. Retreating from Marxian methodology, Hilferding could not understand the real meaning of the new epoch and "overlooked" the parasitism and the decay of capitalism. He understood less of reality than the petty bourgeois writer Hobson who succeeded to a certain degree in demonstrating the parasitic character of modern capitalism.

On the basis of the Marxian theory of imperialism, Lenin concluded that it was possible and inevitable for the socialist revolution to come first in one country, and that the socialist revolution would be extended through the defection of the newer countries from the system of imperialism. Re-

* V. I. Lenin, "Works," Vol. 15, p. 22.

visionists tried to oppose to the Leninist theory of socialist revolution a concept of ultra-imperialism which served as a basis for the chauvinistic, anti-revolutionary, treasonous policy of the revisionist leaders of the Second International.

The victory of the Great October Socialist Revolution, the strengthening of the dictatorship of the proletariat in the USSR, and the creation of the socialist economic system proved the correctness of Marxist-Leninisty theory. The creation of mass Communist Parties and the formation of the Communist International represented a great defeat for revisionism.

At the first stage of the general crisis, in the period of relative stabilization of capitalism, the social-democratic leaders advanced the theory of "capitalist development in a planned way." They declared that capital had entered a period of permanent prosperity, that the general crisis of capitalism did not exist and that the development of "industrial democracy" created "islands of socialism" inside capitalist economy.

The Trotskyites joined the social democrats in holding a faulty, dogmatic view of the possibility of the victory of socialism in one country and denying this possibility. Together with the social democrats and reactionary bourgeois parties they denied the general crisis of capitalism. The rightists advanced the theory of "organized capitalism." Even in the ranks of the Communist Parties, revisionists, repeating the Trotskyites and rightists, advanced theories of a "new capitalism," of "American exceptionalism" etc. All these revisionist views corresponded fully to the frankly apologetic bourgeois theories. Having defeated the revisionists, the Communist Parties joined ranks even more firmly on the basis of Marxist-Leninist theory. Life proved fully the correctness of the line which guided the Communist Parties.

Unprecedented in its severity, the crisis of 1929-1933 followed by prolonged depression, then the new crisis of 1937 demonstrated how baseless were the various theories of "permanent prosperity," "planned capitalism," "new capitalism" etc. As to the theory of "industrial democracy" its objective role consisted of clearing the road for fascism, for the rule of terror by the monopolistic bourgeoisie.

The USSR's victory in World War II over German fascism and Japanese imperialism created favorable conditions for the defection of a number of countries from the system of imperialism and brought about a deepening of the general crisis of capitalism. A world-wide system of socialism was formed. In the competition of the two systems — socialism and capitalism — the socialist system achieved exceptional successes. Though undermined by war, the economy of the socialist countries was restored in a short time. The standards of living of the countries freed from capitalist exploitation, crises and unemployment, rose rapidly. The post-war period became a period of outstanding victories for Marxist-Leninist theory. However, as long as antagonistic classes and class struggle do exist, the successes of Marxism never meant and do not mean an abatement of the ideological struggle. On the contrary, the imperialist bourgeoisie applies greater and greater efforts to propagandize ideologies inimical to Marxism and to spread petty bourgeois illusions among the proletariat.

Fifty years ago Lenin wrote, "It is quite natural that the petty bourgeois philosophy of life should reappear again and again in the ranks of working-class parties. It is quite natural that it should be so and will always be so up to the peripeteia of the proletarian revolution, and it would be a grave mistake to think that a 'full' proletarianization of the majority of the population is necessary for the success of such a revolution."*

* V. I. Lenin, "Works," Vol. 16, p. 23.

Enriched as a result of World War II, the monopolists o the USA doubled their industrial production and brought about a protracted industrial boom through a policy of mi tarization. In the interests of the preservation of capitali and the carrying on of the "cold war" they rendered a cer amount of help to other countries in the restoration of the economy, especially those branches which were of milita importance, and they made certain concessions to their o working class. All this created conditions for the spread illusions concerning the "improvement" and "rehabilitatio of capitalism among some sections of working people. Th reactionaries of all types as well as the reformists could not fail to use this opportunity. They declared that capita ism had radically changed after World War II, that moder capitalism was a "people's capitalism" and that the bour- geois state was a "state of general prosperity." A deter- mined offensive by the bourgeoisie resulted in a revival o revisionists elements in some Communist Parties in capi talist as well as in socialist countries. The assertion beg to be widely disseminated that socialism was being built n only in countries where power was transferred to the han of the working class, but also in capitalist countries, as f example, in Norway, Sweden, Great Britain, etc. The auth of the program of the Communist League in Yugoslavia ho such a position. Their program ignores the splitting of th world into two systems — socialism and capitalism. The question of the existence of the two world systems is, in essence, replaced with the question of two military-politi blocs.

In the United States the revisionists strenuously revive the theory of "American exceptionalism," asserting that t American economy is characterized by its stability, that class contradictions in that country are being softened, a that the state has become a "welfare state," transitional socialism. The revisionists also assert that American in perialism does not aim at world domination and that war has ceased to be a real threat; that capitalism has over- come its contradictions and is developing in a progressiv direction, and that the time has arrived to remove Lenini from Marxism and to return to the Marxism of the Social Democratic parties.

The aim of the bourgeoisie is to subordinate the comm nist movement to the ideology of the right socialists who have shifted their position in the field of economic theory to that of Keynesianism. Some of the revisionists are qui frank. Writing recently in a Polish magazine "Zhitse Gos podarche" (No. 2, 1957), Z. Sadovsky demanded that Marx ism be "enriched" with Keynesian theory. The general ro of Keynesianism consists of opening wide the doors for th penetration of bourgeois ideology into the ranks of the pr letariat.

Keynesianism is the ideology of the monopolistic bour- geoisie in the period of the general crisis of capitalism. Unlike the old apologists, Keynesianism defends and em- bellishes capitalism under the guise of criticism of its defects. Thus, Keynes does not deny the possibility of crises. He considers, however, that an "era of regulated economy" had been ushered in after World War I. Its mo important factor is the bourgeois state whose function it to prevent crises and unemployment. For this purpose it necessary to increase capitalist enterepreneurship throu an enormous expansion of state expenditures directed int any field, even the most unproductive ones. This concept is a theoretical justification of the enormous military ap- propriations by the capitalist states which are considere a means of saving capitalism from overproduction crises

The social reformists found in Keynesianism a theoret foundation for their attempts to replace revolutionary st

le for socialism with puny reforms. Keynes' theory is ropagandized by the reformists as a theory which makes it ossible to improve radically the position of the working lass through the regulation of economic life by the bour-eois state. Yet they do not mention that Keynes' theory ays a basis for the necessity of lowering real wages. Ac-ording to Keynes, stimulation of enterpreneurs' activity de-ands a deterioration of the economic status of workers. In is way Keynes' theory is a confession of the impossibility f solving the contradictions between production and con-umption under capitalism.

The essence of all contemporary Keynesian and other efutations of Marxism, is an attempt to show that capital-sm is not an obstacle to successful economic development, at the capitalist economy may be regulated by the state, at the old capitalism is dead, that there has emerged a ew capitalism, "people's capitalism," which develops in the irection of socialism and will ensure in time a peaceful ransition to socialism... while preserving private property n the means of production.

Reformists try to spread the illusion that different forms f state-monopolist capitalism are already socialism or al-ost socialism. However, state monopoly capitalism has othing in common with socialism.

V. I. Lenin pointed out that state-monopoly capitalism is material preparation for socialism, but that no interme-iary stages exist between this stage of collectivization of he means of production and socialism. So long as the state s in the hands of the largest capitalist monopolies, they use s machinery to enrich themselves and for reactionary pur-oses. Greater intervention of the bourgeois state into eco-omic life does not result in overcoming the conflict be-ween the production forces and capitalist production rela-ons. On the contrary, this intervention sharpens all the ontradictions of imperialism, leads to the ever greater aste of productive forces, and intensifies the decay of apitalism.

Factual proof is the only objective criterion of the validity f a theory. Apologists of the bourgeois regime assert that s a result of state regulation, capitalism does not know rises. But is it true? In the United States, the most owerful state of the capitalist world, in spite of tremendous fforts of the state directed at the development of armament roduction, a crisis-like dip of production has been observed ree times since the end of World War II.

Production in the most important branches is growing un-venly and is reduced even at a time when there is no gen-ral overproduction. Production of steel in the USA in 1948 eached 80.4 million tons and then fell to 70.7 million tons n 1949. In 1951 it rose to 95.4 million tons and fell to 84.5 illion tons in 1952. In 1953 it rose to 101.2 million tons nd in 1954 fell to 80.1 million tons. In 1955 it rose to 106.2 illion tons and fell to 102.7 million tons in 1957. In April, 958 production of steel was less than half of the rated apacity of the industry. Is this not proof of the Marxian hesis that capitalism is not able to utilize rationally exist-ng productive forces?

The critics of Marxism assert that Marx on the basis of acts observed in the first half of the 19th century drew up oo gloomy a picture of the situation of the working class, nd was wrong in his predictions of further impoverishment f the proletariat. But can the apologists of capitalism deny at the scale of unemployment in the 20th century is far reater than that of the 19th century? In the crisis of 1929-932 the number of unemployed in the entire capitalist world eached tremendous figures. They say that this was the last eep crisis of overproduction and that "regulation" of the conomy is the best guarantee against mass unemployment.

But let us examine the official data of the number of unemployed in the United States in the last ten years.

Unemployment in the United States, 1948 to 1956

Years	Number of unemployed, million men	Number of partially unemployed, in million men	
		Employed from 1 to 14 hours a week	Employed from 15 to 34 hours a week
1948	2.0	1.9	8.5
1949	3.4	2.1	9.7
1950	3.1	2.3	9.8
1951	1.9	2.3	8.4
1952	1.7	2.0	6.9
1953	1.6	2.0	8.1
1954	3.2	2.4	11.0
1955	2.7	2.6	7.8
1956	2.6	3.0	8.1

In March 1958 the number of fully unemployed reached six million.

The labor unions in capitalist countries are also seriously worried by the deterioration of the position of the working class under the influence of technological progress. Beside crises and changes in business conditions, automation of production becomes more and more important in the growth of unemployment.

In the light of these facts is it possible to assert that the position of workers in the 20th century is more stable and secure than it was in the 19th century? On the contrary, the instability of the position of the working class and the uncertainty of the future have increased tremendously. No progress in the field of social legislation is able to remove the consequences of the anarchy of capitalist production, the whole burden of which lies on the shoulders of the working class.

The varied and refined methods of exploitation of the toiling masses, the intensification of labor and the plunder of the people used by the ruling classes of capitalist countries in the 20th century, were unknown in Marx's time. The methods of intensification of labor in the 19th century cannot in any way be compared with the contemporary "scientific" sweating systems of Taylorism, Fordism and the new improved varieties of such systems. Their application leads to the depletion of the physical and spiritual power of workers. It is in the 20th century that the age of workers became a serious problem. Older workers (in the United States those above 45 and sometimes above 35) are not hired by industry. Are not the growth of intensity of labor, illnesses, and the limitation of the age at which workers are hired (long before reaching the pension age) reflected in the material conditions of workers' lives?

In the 19th century the taxation systems of the bourgeois states contributed to a great degree to the exploitation of labor. Yet never before did there exist a situation such as for example in the USA, where workers have to pay about one-third and sometimes even a larger part of their wages in the form of taxes.

The position of the small and middle entrepreneurs also becomes unstable in the capitalist countries. This may be illustrated by the changes in land holdings and the situation of the farmers in the United States. A larger and larger part of the land is being concentrated in the hands of large capitalists. In 1910, large farms with an area of more than 1,000 acres, occupied 19% of the total land area in farms; in 1950 they occupied 42.6%. In the post-war period the number of farms was reduced by one million. For quite

some time the revisionists preached the well-known theory of "stability" of peasant farms. The bankruptcy of this theory is so evident in developed capitalist countries that it does not find supporters any more. Bourgeois economists and politicans, for example, now openly preach the necessity of reducing the number of farms in the USA to three million and in France to one million.

How can the "middle layers" of capitalist society increase their numbers when the numerous "middle layer," the mass of farmers, is ruined and turned into proletarians?

The reformists tried to strengthen their theory of the "middle layers" through the statistical processing of income data. Not only is the so-called "income revolution" completely at variance with the facts, but also the very methodological basis of this theory — the determinationa of social status not according to property relations but according to the size of income is absolutely unscientific. The thesis established by Marx remains undisputed: that not only the products of labor are reproduced, but also social relations; that in the process of capitalist reproduction the working class comes out in the same social position as it entered, that is, as a class deprived of property in the means of production. The system of "profit sharing" (in fact through a decrease of wages) and the sale of shares to the workers do not change the position of the working class in any way. The facts show that the so-called "income revolution" is just the latest in a series of propaganda inventions of the bourgeoisie, seized upon by the opportunists for their justification of the sell-out of workers' interests. If workers' incomes are growing, how can one explain the fact that enormous quantities of agricultural products in the United States find no market, that the production of fabrics, shoes, and other branches of the light industry is stagnant, that stocks of unsold goods are growing? In 1952 the physical volume of retail sales per capita in the United States did not show any growth; in 1954 it was reduced by one per cent as compared with 1953; in 1956 it remained at the level of 1955. How can these facts be reconciled with statements about the growth of workers' incomes?

According to official data, 69% of families and single households in the United States in 1954 did not have the earnings necessary for a minimum standard of living; yet at the same time the incomes of the largest capitalists increased tremendously.

Individual fortunes such as appeared in the 20th century were unknown in the 19th, in Marx's time. Billionaires appeared and their incomes continued to grow rapidly. The general secretary of the Austrian Communist Party Fuernberg was right when he wrote, "The old Rothschild is a poor orphan compared with today's big capitalists."

Thus the state of "general prosperity" is a state of billionaires. The purpose of production in capitalist countries has not changed; it remains the same as in Marx's time. Gain and profit-making determine the character of capitalist economy today as they did before.

The concessions which the capitalists are compelled to make for the preservation of their rule should not deceive the working class. "The capitalist beast is wounded, but is still very dangerous: it is the same capitalist eager for profits at any price." (Foster.)

The regulating influence of the capitalist state, more than ever, is directed mainly to the slowing down of the growth of the productive forces. In recent years the United States spent hundreds of billions of dollars on the production of armaments. These colossal unproductive expenditures delayed for some time the start of a crisis, though in fact a gigantic overproduction of goods and capital had taken place. The government of the United States spends enormous sums on subsidies to reduce agricultural production. The main worry of the capitalist state is not the development of agriculture but the reduction of production volume.

Between 1914 and 1920 the products of manufacturing industries in the United States increased by 37 or 38%. In order to achieve approximately the same growth after Worl War I, twenty years were needed (between 1920 and 1939). During the period of World War II the production of United States' industries more than doubled; but in the fourteen years between 1943 and 1957, it increased only by 12.6%. The monopolistic bourgeoisie looks for salvation from economic crisis to the militarization of the economy, to the preparing and unleashing of war. The facts, however, show that the higher the level of militarization of the economy, the greater will be the fall of production with the start of a crisis.

Keynesianism and other conceptions of "regulated" capitalist economy are, in essence, only attempts to find a basi for the prolongation of the life of capitalism at the price of destruction of the productive forces, a senseless waste of labor resources and material means.

Revisionists in general, and in particular in the United States, lull the masses with assertions that there is no danger of war or that this danger is unreal. Such treatment of the question of war distorts reality. The decisions of the 20th Congress of the CPSU, which represent a creative development of Marxism-Leninism, show that under present conditions war is not inevitable. However, this does not mean that war is impossible, that imperialists in the United States do not aim at world domination, etc. So long as imperialists exist, imperialist wars are possible.

The revisionists demand a return from Leninism to Marxism. But this is nothing but a retreat from Marxism because Leninism is the Marxism of our epoch, the epoch of transition from capitalism to socialism, the epoch of creation of the socialist system of economy on a world-wide basis. Marxism received its real scientific extension only in Leninism. Revisionists and reformists demanding renunciation of Leninism "in the name of Marxism" have as their goal replacement of Marxism with Keynes' theory.

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The victory of socialism in the USSR and the formation and consolidation of the world socialist system is the greatest triumph of Marxian theory. The new regime, which Marx predicted would replace capitalism, does exist and is victoriously marching on.

Life has confirmed the conclusions of Marx's genius abou the inevitablity of the socialist revolution and the dictatorship of the proletariat, and his scientific characterization of the basic features of future socialist society. Marx foresaw that great possibilities would be opened by socialism for the planned and rapid development of the productive forces for the purpose of the uninterrupted growth of the people's welfare.

No calumnies will refute the fact that in the socialist countries social property in the means of production predominates, that production is being developed in a planned way in the interests of satisfying the growing needs of the people, that this development is proceeding without crises and dips at a rate greatly exceeding the rate of development in capitalist countries. They cannot refute the fact that a new regime has been created which does not know unemployment, a regime in which the toiling people look with assurance to the future.

Socialist society creates especially favorable conditions for the development of science and technique. The great scientific-technical achievements of the USSR are triumphs not only of physics, mathematics, and technology. The first

rtificial satellites were created in a country whose devel-
pment is guided by the socialist state in accordance with
ie objective laws discovered by Marx. The CP and the So-
iet Government, guided by Marxist-Leninist theory, ensure
ie best conditions for the development of the economy, sci-
nce, culture, and education. The whole world recognizes
ie superiority of the socialist system of education and or-
anization of scientific research. The advantages of social-
sm are fully connected with the fact that the development
f the economy, as well as of science and education, serves
ie people. This is possible only in a country where the
ighest form of democracy — the dictatorship of the prole-
ariat — is predominant.

Greater and greater masses of working people in the en-
ire world take part in the struggle for peace, democracy,
nd socialism. Thirty-three million members of the Com-
nunist Parties leading enormous masses of the people —
iat is the triumph of Marxist-Leninist ideology. The
owerful camp of socialist countries represents Marxism-
eninism realized in the life of more than one-third of man-
ind.

The Conference of the representatives of the Communist
nd Workers' Parties at the end of 1957 dealt a decisive
low to revisionism in the ranks of the workers' movement.
)ne may see the best proof of the victory of Marxism-Lenin-
sm in this further cementing of the unity of the Communist
Parties and the further strengthening of the international
olidarity of the laboring mass. Though carrying on their
truggle against revisionism, the Communist Parties at the
ame time refuse to interpret Marxism dogmatically.

Marxism-Leninism is not something frozen and rigid. It
s a creative theory, constantly enriched by new conclusions,
eneralizing the development of human society and the ex-
erience of working class struggle. In order to apply suc-
essfully this theory we should use not dogmas and quota-
ions, but consider new conditions created by the course of
ocial development. The revolutionary measures, carried
ut at the initiative of the Communist Party of the Soviet Union in the improvement of industrial and construction management and in the development of the kolkhoz regime, may serve as examples of the creative application of Marxism-Leninism.

Marx's genius foresaw that communist society would be built as a result of the stubborn struggle of the working class followed by a prolonged period of overhauling of the whole economy and of re-educating the toilers themselves. This stage would be characterized by such a level of productive forces that all sources of social wealth would flow like a spring flood, and labor would cease to be only a means to life but would become the first necessity of life. The aim of the proletariat would be realized — everyone would give to society according to his abilities and would receive from it according to his needs. The spiritual world of man would flourish in all its fullness.

Marx taught that a classless society would be formed as a result of the proletariat's struggle, but that the establishment of the proletarian dictatorship would be the first step toward the abolition of all classes. Taking Marx's theses as his starting point, Lenin pointed out that in order to abolish classes it was necessary to remove differences between workers and peasants gradually. The victory of the kolkhoz regime in the USSR was a gigantic step in that direction.

The Communist Party of the Soviet Union takes further measures to ensure a development of the productive forces and socialist production relations as would create the necessary conditions for the transformation of the workers, peasants, and intelligentsia into workers of a Communist society. Applying Marxism-Leninism creatively, the February, 1958 Plenum of the CC, CPSU and the session of the USSR's Supreme Soviet outlined a most important series of programmatic measures, which in the final account will fuse the existing two forms of social property into a single communist property and will bring about a complete abolition of classes.

The successes in building a classless communist society in the USSR, the achievements of the toilers in the people's democracies in building socialism, demonstrate the triumph of Marxism-Leninism.

S. Vygodsky:

Marx's Economic Theory and His Present Critics

V. I. Lenin wrote that the deepest, most comprehensive and detailed support and application of Marx's theory comes from his economic studies. On the basis of his scientific analysis of the origin of the capitalist system of economy, its nature and tendencies of development Marx discovered the economic law of motion of bourgeois society and proved the inevitability of its replacement with a new, higher social regime, socialism.

At a certain stage of development of the productive forces private property in the means of production becomes an obstacle for the further progress of society. In order to bring production relations into conformity with the character of the productive forces the rule of capital should be replaced with the rule of labor. "We know," wrote Marx as early as 1856, "that the new forces of society, in order to function properly, need only one thing: new people have to own them, and these new people are the workers."(1)

In our time, when capitalism increasingly chains and distorts the development of society's productive forces, when large-scale industry in the most important imperialist countries is in the service of militarism, when the waste of productive forces acquires dimensions never observed before, these words of Marx have special force and carry special conviction. It is not an accident that Marxist teaching ceased to be the property of few advanced proletarian leaders and became the banner for hundreds of millions of men in all corners of the world.

However, the more the course of historical development proves the incontrovertible power of Marx's theory, and the more irresistible becomes the process of the downfall of capital, the more fiercely the opponents of Marxism try to prove that Marx's teachings have become obsolete, that the development of capitalism in the 20th century or at least after World War II goes in a different direction than the one Marx foresaw.

For example, a prominent member of the labor movement in Great Britain, G. D. H. Cole, wrote in autumn 1957: "Now it is unreasonable to predict with assurance as Marx did the close end of capital because of its inherent contradictions."(2)

Critics of Marx today, just as the revisionists of the "good old days" try to prove that the new facts of economic life in capitalist countries do not support Marx's theory. The growth of the industrial product and the reduction of the army of unemployed in a number of capitalist countries in the post-war period, an insignificant increase in wages for some layers of workers in the highly developed countries, obtained in stubborn struggle by the toilers, are considered by Marx's critics as the proletariat's emancipation from impoverishment, unemployment and crises, as proof that contemporary capitalism has become more stable, regulated and managed. However the facts, undoubtedly, testify that the economic laws of development of capitalist society, discovered by Marx and Lenin, continue to function under conditions of contemporary capitalism.

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The cornerstone of Marx's economic theory is his theory of surplus value. Having discovered the law of surplus value, demonstrated the real relation between labor and capital, Marx brought about a revolution in economic science.

The opinion has always prevailed in bourgeois political economy that the relation between labor and capital, between wage workers and owners of the means of production is just an ordinary transaction of sale-purchase, that the workers are ordinary sellers and capitalists also ordinary purchasers of labor. Marx proved the complete bankruptcy of this apologetic point of view. Yet in our time this view is revived by Marx's new critics. For example, in a book published in 1957, "The Post-War Condition of Britain," Professor Cole writes: "...The struggle between classes, though it does not cease to exist, necessarily changes its human character. It becomes more and more a contest, not between unlikes, but of like with like, carried on with more mutual knowledge and understanding."(3)

There is no necessity to prove that no legal equality of workers and capitalists as sellers and purchasers of labor power will undo the decisive fact that the purchasers of the labor power — capitalists — appropriate without remuneration the result of the labor of wage earners; that in capitalist society the unpaid labor of workers is a means of expansion of the power and domination of capitalism over labor.

Marx created a scientific theory of wages under capitalism. He showed that the value of labor power is determined by the value of the means of consumption necessary for the maintenance of the workers' life, and consists of two elements: the purely physical and the historical or social. The lower limit of value of labor power is determined by the value of a minimum of products absolutely necessary for the existence of the workers and their families. In addition to that the value of labor power is determined by the standard of living that has come into existence in a given country. This level includes the satisfaction of certain needs, brought about by the social conditions existing in that country and by the upbringing of the workers. National differences in wages, higher wages in the developed capitalist countries as compared with backward countries, is to a considerable degree determined by variations in the value of labor power in corresponding countries, determined by their geographic position, climatic conditions and most of all, by their historical development. Capitalists constantly strive to reduce wages to a physical minimum. The working class struggles to raise its standard of life. Whether the proletariat is able to cross the lower, purely physical boundary of the value of labor power depends upon the class struggle of the proletariat, the degree of its organization and the degree of the capitalists' resistance. "The result is determined by the relationship of the forces participating in the struggle."(4)

Marx's theory of wages as well as his whole economic theory has undergone fierce attacks by the partisans of the capitalist regime for decades. Unsuccessful attempts to refute his theory are undertaken in our times too. Thus, one of the prominent Labor Party leaders, John Strachey, rejects Marx's theory on the "basis" that an extremely important commodity, namely labor power, does not show a tendency to be sold at its value. This tremendously important fact, writes John Strachey, places in a difficult position not only the labor theory of value, but also the related

cheme of distribution of the national product among the lasses.(5) The law of value cannot be applied to the commodity "labor power," according to Strachey; wages cannot e reduced to the means of existence. (6)

Marx's critics ascribe to him views which he never shard. Marx never said that wages cannot rise above the value f the worker's minimum means of existence. It is well nown that Marx and Engels sharply criticized Lassalle's iron law of wages," "based on a completely outmoded economic view that the worker gets on the average only minial wages..."(7) In "Capital" Marx showed in great detail hat the laws regulating wages in no case are iron laws, but, n the contrary, are very elastic. But Marx pointed out that whatever the differences in the conditions of workers' lives n various countries and at various historical periods, for very given country at each given period the volume and omposition of the means of life is a definite quantity. That ocially necessary time which is required for the reproduction of a given volume and composition of the means of life etermines their value and the amount of wages.

John Strachey affirms that labor power does not show any endency to be sold according to its value. But is not the cost of living" a generally accepted term of the official statistics in all countries of the capitalist world? And if bourgeois statistics tries its best to underestimate the cost of iving for workers, is it not because this cost has a definite mportance for the wage level?

However, John Strachey himself understands that one cannot deny the dependence of wages upon the cost of living. To significant question raised by him: "In what respect was Marx right and in what respect was he wrong?" he answers n this way: "Marx was right that the capitalist system hows a strong tendency for maintaining the wage level at he level of living costs, but he failed to see that this tendency under certain conditions may be overcome mainly hrough non-economic forces."(8)

But if the capitalist system shows a strong tendency to naintain the level of wages at the level of the cost of living, hen why has the commodity "labor power" no tendency to be old at its value? In vain would we try to search for an answer to this question by Strachey. As to the non-economic orces, history teaches us that increases of wages under apitalism comes as a result of a fierce class struggle and ach time are a belated reaction to the rise in the cost of iving. The increase of the cost of living, in turn, is a result of the depreciation of money and the raising of prices f consumption goods by monopolies, increases in rent, igher taxes etc. All this is confirmed by the modern economic development of the capitalist countries.

For example, in Great Britain consumption expenditures f the population, according to the data of Prof. Cole, at urrent prices rose from 4,394 million in 1938 to 11,854 illion in 1954, or 170%. In 1948 prices the rise was from ,564 million to 9,467 million, or 10.5%.(9) On this basis ne may conclude that the actual index of the cost of living s compared with 1938 taken as 100, amounted to 244 in 954 (270:110.5). According to Cole's data, weekly wages f British workers increased in 1954, by comparison with 938, by 138%.(10) Thus real wages in 1954, which was a ear of boom for Great Britain, were 2.4% lower than in 938. According to the Monthly Bulletin of Statistics of the Jnited Nations the weekly money wages of British workers ncreased between 1954 and 1957 by 21%, while the cost of iving increased by 13%. If we consider that, according to Cole, the official data of the cost of living are underestimated, then it is quite evident that the real wages in England in 957 were hardly above the level of 1938. In the post-war eriod the increases of wages in Great Britain were constantly lagging behind the rise in prices of consumption goods. The situation in the United States is similar. For example, the authors of "Labor's Untold Story" wrote the following about the strikes of 1945-46 which embraced 8.1 million members of labor unions: members of the striking pickets were carrying placards on which were written the following slogan: "Now there is only one front, the front of the struggle for living wages."(11)

The wages of American workers in 1945-46 were only 15% above the level of 1941, while prices rose 45% and the profits of capitalists increased 250%.(12) After World War II the position of the American working class did not improve greatly. According to the official data the money wages of workers of the manufacturing industry increased between 1945 and 1956 by 79% while the prices of consumption goods increased by 51%.(13) In other words, real wages in eleven years increased by 18.5%. That the official price index for consumption goods as a rule is underestimated must also be taken into consideration. More precise data show that real wages in 1954 were 1% lower than in 1939. After some rise of wages in 1955-1956 they went down in 1957. On the whole real wages in the United States during the post-war period have remained somewhat below the level of 1939, in spite of a substantial rise in hour rates. The sum of wages paid by manufacturing industries of the United States from November 1956 to November 1957 was reduced 5.2%, while, according to official data, the living costs increased 2.1%. This means a reduction of earnings only for one year of 7.4%. "U.S. News and World Report" (March 7, 1958) states that people existing on wages were hard pressed. The purchasing power of an average working family with three dependents in the past year fell by 4.6%. It may be stated with certainty that real wages in the United States in 1957 did not exceed the pre-war level.

In France, even according to official data, wages in 1957 were considerably below the prewar level.

The working class, resisting capital's offensive against its standard of living, prevents the tendency for real wages to fall from being realized. The founders of Marxism emphasized the great importance of the working class' struggle with the predatory attempts of capital to reduce wages. If the workers gave up their everyday struggle with capital for the betterment of their labor conditions and for the raising of their standard of living, then, Marx said, "They would turn into an indifferent mass of demoralized poor for whom there is no hope... If in their everyday struggle with capital the workers weakheartedly were to make concessions, without doubt they would be unable to start any wider movement."(14)

The Communist and Workers' Parties of the capitalist countries, following Marx's teachings, are heading the struggle of the toiling people for their interests, for the conquest of power, for the end of the capitalist regime and for the construction of a socialist society.

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Lenin wrote: "The analysis of capital accumulation in Marx's works is new and is extremely important."(15) This analysis make it possible to determine the basic contradictions of capitalist expanded reproduction. Closely connected with the accumulation of capital is the main tendency of capitalism, namely, that the means of production become more and more the monopoly of one diminishing part of society, become a tool of exploitation of a larger and larger number of wage earners.

The opponents of Marxism assert that Marx was wrong in the question of the class composition of modern society. They say that instead of increased polarization of society at two opposite poles — the capitalists and proletarians, there emerged a much more differentiated society with a rapidly

growing group of highly skilled office workers, managers and technical specialists whose position ensures them a degree of prosperity. But does an increase in the number of the so called middle class — higher layers of office workers, technical specialists, persons belonging to free professions and state employees — substantially change the class structure of bourgeois society? In Great Britain, for example, according to the 1951 census data the workers and lower groups of office workers make up 87.5% of the economically active population. In the United States the proportion of the workers and lower groups of office workers increased from 55% in 1870 to 75.3% of the economically active population in 1954.

The division of bourgeois society into two basic classes — the bourgeoisie and the proletariat — of course does not mean that bourgeois society consists only of these two classes. Marx categorically objected to such a simplified picture of bourgeois society and to an underestimation of the middle groups which increase "the power of the upper ten thousands." However, the existence of the middle groups, a certain part of which by their way of life is close to the bourgeoisie and serves to a certain degree as its support, in no way softens the class contradictions of today's society.

The action of the law of accumulation is not limited to the growth of the number of proletarians and semi-proletarians. As Marx showed, in the process of accumulation the fixed capital grows more rapidly than the variable capital. Because of that the demand for labor power not only does not increase in step with the growth of accumulation, but, on the contrary, accumulation of capital contributes to the more rapid replacement of workers with machines and creates a reserve industrial army. Important groups of workers, who have no regular earnings and decay in poverty, produce pressure on the labor market, increasing the tendency of wages to go down. Even the official statistics have to admit the existence in the most disimilar capitalist countries of many millions of workers living in poverty or on the border of poverty. The most ardent opponents of Marxism and preachers of the "welfare state" under capitalist monopolies, cannot deny this.

In his book John Strachey makes the following admission: "Before World War II in Great Britain 17.6 million out of 20 million, or almost nine out of ten persons, belonged to the working class... Of these, 12 million men earned an income which was hardly above the existence level. The other group of about 1.2 million men were getting an income of middle class people from £ 250 to £ 1,000 a year. A small group — 300,000 — of very rich people received a significant part of the total national income. 12 million men had an income less than £ 125 a year per worker, that is, lived in poverty. Many of them had to support their families on such earnings."(16) Is any better illustration of the basic tendency of capitalism, established by Marx, necessary?

Trying to refute Marx's theory of the proletariat's impoverishment, Strachey asserts that after World War II the representative bodies produced such pressure upon capitalism that the rise in the living standard went hand in hand with the growth of the national product.(17) The same is repeated by Cole. He declares that problems such as poverty and unemployment "that were acute twenty years ago have receded into the background or even disappeared."(18) Is this true?

Here are the data on the structure of consumption in Great Britain before and after World War II. Per capita butter consumption in 1953, as compared with 1934-1938 was reduced by 47% while the consumption of margarine increased by 104%; the amount of meat consumed was reduced by 15%; fish, fowl, and game was reduced by 22%; sugar — by 4%; fruits by 3%; while the consumption of potatoes, on the contrary, increased by 22%. It is true, the consumption of milk products per capita (with the exception of butter) increased 36%; but this increase cannot com pensate for the reduction in the consumption of butter, mea fish, fowl etc. G. D. H. Cole considers that the growth in consumption of potatoes and margarine on the one hand and the reduction in the consumption of butter, meat, fish, suga and fruits on the other was caused by rationing, limitation of imports, state subsidies, and other causes. However he is compelled to admit that after the abolition of rationing "rationing by order, as it was removed, was replaced by 'rationing by the purse.'"(19) This, of course, is true. According to the official data the wages of British male workers between 1948 and 1954 increased by 32.7%, while retail prices increased by 32.4%.(20)

G. D. H. Cole writes that "At the very bottom of the soci structure there is still deep poverty; but sheer starvation has almost disappeared and the size of the submerged 'ten has been very greatly reduced."(21) Some decrease in the number of distressed people after World War II in Great Britain as well as in some other developed capitalist countries is connected with an increase in employment, a decrease of unemployment and an improvement in the system of social security which was observed before the autumn of 1957. But neither taken separately nor collectively could these factors radically and for a long time improve the life of workers nor could they remove the problem of unemploy ment and poverty. It is enough to point out that British industry has no serious prospects of further development not only because of the economic crisis now developing in the United States, but also because of the action of other factors, primarily the sharpening of the struggle for markets and the policy of ruling groups in Great Britain which plac the economy of the country in growing dependence upon the United States. In spite of Cole's assertion that "today... unemployment, though it continues to exist, for the time be ing is not a major problem, except in the sense that the fear of it is still powerfully present in many people's minds."(2 Not only is the threat of unemployment felt in Great Britai but a noticeable growth of the number of unemployed is observed. In 1956 the number of unemployed in Great Britain was 287,000(23), in February, 1958 — 472,000.(24) As to th conditions of social security, they have somewhat improve in the post-war period. Thus in the period between 1938 an 1954 appropriations for social insurance and other kinds o social security increased from £ 123 million to £ 934 million, or by £ 811 million. But from where do these sums come? Were they taken from the purses of capitalist monopolies? Was the gulf dividing the upper groups of large owners and the millions of toilers at the base of the social pyramid reduced? In order to get an answer to thes questions it is enough to glance at the revenue part of the state budget. During the period under examination indirect taxes increased by £ 1,507 million and insurance contributions by £ 423 million. Even if we agree with Cole that only 50% of the insurance contributions are paid by the workers and consider that they pay only 70% of the indirec taxes, even under these conditions it becomes evident that while appropriations for social security increased by £ 81 million, the workers lost about £ 1,266 million in taxes paid out of their wages.

A subcommittee of the United States Congress investigating the situation of low income families stated: Undoubtedly the general growth of economic prosperity did not cover a considerable part of the population. According

o the data of this subcommittee in 1954 the number of families and single persons with incomes of $1,000 a year (in 948 dollars) amounted to 18.7% of the total number of the amilies and single persons. Between 1948 and 1954 the umber of families and single persons with such a low income increased by 1,531,000 and together with the group of ersons with income of less than $2,00 a year (at 1948 rices) it numbered 17,524,000 in 1954. In other words, out f the total number of 51,600,000 families and single persons n 1954 17,500,000, or 34%, were in distress or were on the order of poverty. In 1954 the income of no less than 50% f the families was too small to satisfy "the necessary minium of personal, social, as well as biological needs." All hese facts show that in the richest country of the capitalist orld the living standard of an important section of the toilrs is inside the lowest boundary of the value of labor power.

Today, critics of Marxism try to refute Marx's theory of mpoverishment by citing the fact that in the most developed apitalist countries the number of persons owning cars, teleision sets, refrigerators, washing machines etc. is expandg. It would be wrong to deny the fact. However, it is imortant to determine its real significance.

The growth of labor productivity expands the needs of the orking class. Marx wrote that with the increase in labor roductivity the mass of the workers' means of living may row.(25) Marx repeatedly emphasized that the greater the roductivity of a country, the higher the real wages, the arger the number of needs the workers may satisfy.(26) his statement is true also in respect to different historical eriods. V. I. Lenin wrote: "The development of capitalism nevitably brings a rising level of needs of the whole populaon as well as of the working proletariat."(27) The needs f the workers have now expanded and include television ets, refrigerators etc.

At the same time one has to keep in mind the following. In rder to pay for such goods, bought as a rule on an installent basis, a worker's family has to give up necessities. Thus n the United States consumer indebtedness increased from 4.3 billion dollars in 1947-49 to 43.3 billion dollars in Octber, 1957 and credits for the construction of small dwellngs increased from 34.7 billion dollars to 105.4 billion dolars (September, 1957).(28)

The expansion of the production of cars, television sets, efrigerators etc. in recent years took place at the same me as production in the food industry, the textile industry, nd footwear was falling. Here are the data. The production f passenger cars per capita in 1957 increased, compared with 947-49, by 25.1%, while food industry output decreased by 4.1%. he share of automobile production in the total industrial prodct of the United States in 1947-49 amounted to 1.5% and roduction of the food industry to 10.73%. Thus, an increase f passenger car production of 25.1% means an increase in he volume of production per capita by 0.34%. Reduction of ood industry's production by 4.1% means reduction of the otal volume of production per capita by 0.44%. The total olume of products per capita was reduced. Because of the ise of prices many millions of workers were compelled to educe their demand for necessities (food, clothing, etc.) nd though the better paid groups of manual workers and ofce workers are able to buy passenger cars, refrigerators, ashing machines and television sets, this does not make ny easier the situation of other millions of workers.

The deterioration of the situation of the toilers and their bsolute impoverishment frequently takes place in spite of he growth of real wages and the increase of the volume of onsumption. With an increase in the intensity of labor the orkers need better food, medical service, etc. If these rowing necessities are not satisfied or are not satisfied fully, an absolute deterioration of the working class position takes place.

Ignoring facts, the opponents of Marxism stubbornly repeat: "The rich become poorer, the poor become richer." Almost one hundred years ago the British Chancellor of the Exchequer, Gladstone, boasting of the amazing growth of wealth and power of the property classes, said to the poor as a consolation: "While the rich became richer, the poor, in any case, have become less poor." Concerning this statement Marx said: "If the working class remained poor and only less poor as compared with the amazing growth of wealth and power of the propertied classes which the working class created, it means that relatively the working class has remained poor."(29)

Under modern conditions the process of relative impoverishment of the toilers is going on with great intensity. Their part in the national income of the capitalist countries is steadily falling while the part of the ruling classes is increasing. The capital of the three richest families in the United States — DuPont, Rockefeller, and Mellon — increased from 1,362 billion dollars in 1937 to 11,944 billion dollars in 1956, that is, almost nine times.(30) But the wealth of the billionaires is determined not only by the wealth of their own shares, but also by the size of the capital they control. The eight richest families in the United States in 1955 controlled capital amounting to 218,490 billion dollars.(31) This grandiose sum equals the annual wages of more than 52 million men (on the basis of the average wages paid to the workers in the manufacturing industries in the United States in 1957). Is it possible to deny in the face of this deep, unbridgeable gulf between a handful of monopolists and tens of millions of workers, farmers and lower groups of office workers, to deny the growing relative impoverishment of the toilers under capitalism? Had there been in the past in the United States, Great Britain, or other capitalist countries such a great difference between the economic position of the toilers and the ruling classes? Even such a violent opponent of the Marxist theory of impoverishment as Strachey wrote concerning the share of the workers in the national income: In the last 15 years the part of wages in the national income has again increased, but probably not more than necessary to bring it back to the level of 1860.(32)

Thus, after all "revolutions" in the distribution of the national income, the position of the working class in Great Britain in any case is no better than it was in 1860. How is it possible then to affirm that Marx's theory of impoverishment is obsolete?

The opponents of Marxism present the Marxist-Leninist theory of impoverishment in a simplified, vulgar form ascribing to the Marxists an absurd opinion, as if "the workers become beggars" with the development of capitalism. They slanderously assert that according to the theory of impoverishment, the situation of the working class becomes worse and worse from year to year, from month to month, or almost from day to day.

In fact, Marxists never considered the impoverishment as a process which goes on uninterruptedly. As it is stated in the program of the CPSU, "the crises and periods of industrial depressions... increase even more the dependence of the wage earners upon capital, even more quickly bring about a relative and sometimes even absolute deterioration of the working class' position." But in the rising phase of the business cycle the working class may be able to obtain some improvement in labor conditions. Through stubborn class struggle the workers may counteract the deterioration of their position, weaken and limit the action of the law of impoverishment.

In Engels' work "Critique of the Draft Social Democratic Program of 1891" we find an important interpretation of this question. After quoting the words of the draft program that under capitalism the "number of proletarians and their poverty are increasing" Engels said "This statement, in such an absolute form, is wrong. The organizations of workers, their ever growing resistance, possibly, may build a dam against the growth of poverty. But we may say with certainty that the insecurity of workers' existence is growing."(33)

In his article "A Draft Program for Our Party," written in 1899, V. I. Lenin characterized the growth of poverty as a tendency which becomes a reality when the proletariat does not conduct a class struggle against it. Under conditions of the all-powerful monopolies, the militarization of the economy, the increase of prices and inflation this tendency becomes noticeable with special force and is one of the most important causes of the growth of the large mass offensive of the working class for the defense of its vital interests.

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The Marxist theory of economic crises is most closely connected with the analysis of the accumulation of capital. Marx was the first to substantiate the statement that the accumulation of capital "forms an immanent base for the phenomena appearing in crises."(34)

Being a product of capitalist accumulation, the industrial reserve army becomes an important condition of expanded reproduction on a capitalist basis. It allows capital at certain periods to attract large masses of men for expanding the old or creating new branches of production. Furthermore the fact that in the process of accumulation fixed capital grows more rapidly than variable capital means that the production of means of production grows more rapidly than the production of means of consumption. Because of this certain possibilities for the growth of the domestic market are opened and these possibilities to a certain degree are "independent" of the growth of personal consumption and take place mainly through the growth of productive consumption. At the same time some increases of demand for consumption goods take place during the boom period, a fact which is connected with the absorption of new masses of men into the process of production as well as with some rise in wages which is not infrequently observed during periods before crises.

But this short-lived and very relative workers' prosperity is, as a rule, a precursor of a crisis. While the construction of new plants and the expansion of old ones goes on, while the investment in fixed capital is growing, the demand for tools and means of production and to a certain degree for additional labor power and consequently for means of consumption is increasing. But the insatiable striving of capital for accumulation soon results in production passing the boundary of consumption.

V. I. Lenin at one time wrote that the possibility which the existence of the industrial reserve army opens for the rapid expansion of production "in connection with credit and the accumulation of capital in the means of production forms a clue to the understanding of crises of overproduction taking place periodically in capitalist countries first each ten years on the average and then at longer and less definite periods."(35)

The enormous possibilities for large-scale industry to expand meet the narrow limits of consumption, the inability of the market to follow the increase of production. The mass of products, thrown on the market, cannot be bought because of the limits of the effective demand of the workers. It then becomes apparent that the "independence" of production from the personal consumption of the broad masses is not an absolute independence. This "independence" creates only the temporary possibility for the development of production. But the more fully capital utilizes this possibility the sharper, the more pronounced becomes the conflict between production and consumption, a conflict which is only an expression of the basic contradiction of capitalism, namely between the social character of production and the private capitalist form of acquisition.

V. I. Lenin called overproduction crises fits of a chronic disease. Crises under capitalism — an incurable disease. They show a growing disparity between bourgeois production relations and the character of existing production forces.

How much ink was spilt by the bourgeois economists on the problem of development of capitalism without crises! The history of economic crises is the best proof that the Marxist-Leninist theory of the inevitability of economic crises under capitalism cannot be refuted.

Between 1839 and 1937 the economy of the United States passed through twelve crises of overproduction. In the last twenty years (1939-1958) it was thrown back in its development under the influence of crises four times. The threat of economic crises is now hanging over other capitalist countries. Last autumn Prof. Cole wrote, not without reason, that if a serious depression develops in the United States, other leading capitalist countries cannot maintain their employment in view of the sharp reduction of the American demand for their products as well as a decrease in the American subsidies and loans. Cole also understand that now that the countris of Western Europe have not only restored their economies, but also have expanded their industrial production as compared with the prewar level, the are threatened with an economic crisis of overproduction in the same degree as the United States. He writes that "it i impossible to insist with certainty that the rest of the capitalist world would not have a depression even if there is n depression in the United States."(36) Nevertheless this theorist of the laborites, in contradiction with everything that he stated before, affirms that now "there are more chances than formerly to avoid a depression or to make it spend its force before it produces its worst results."(37)

Historical experience shows that one cannot avoid crise under capitalism. An increase in unemployment benefits a well as improvement in respect to other social security benefits or the organization of public works can only to a certain degree mitigate the consequences of a crisis. The realization of such measures on a large scale is in genera impossible with the militarization of the economy when th lion's share of the budget goes into the armament race.

As to militarization as a means of artificial stimulation of the economy, experience shows that as greater and greater doses of the militarist "elixir" are pumped into th capitalist economy, their effectiveness decreases. It is enough to say that United States' expenses for armaments between 1940 and 1945 amounted to 275 billion dollars and between 1946 and 1957 to more than 400 billion dollars. Nevertheless while between 1939 and 1943 industrial production increased by 119%, or more than twice, during the next 14 years (with considerably larger expenditures on armaments) it increased only by 12%.

The growth of militarization of the economy not only ca not be a source of uninterrupted expansion of production a stable prosperity, but in the final account it undermines th very basis of expanded reproduction. The result of the mi tarization of the economy is that a larger and larger part the social product is taken out of social production and do not serve either as means of production or as means of c sumption. How timely Marx's words of almost a hundred years ago appear that "economically a war is equivalent t a nation throwing a part of its capital into the water."(38) Militarization of the economy leads to the removal from t

here of reproduction of an enormous mass of products of bor, to the withdrawal from the workers' pockets of a rger part of their scanty earnings. That is why the de- and of some leaders of the American labor unions to put sh into the pockets of the unemployed through an expansion military expenditures is not in the interests either of the employed or of the workers. The realization of this de- and is a direct threat to the security of the American peo- e as well as of other peoples of the world.

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The economic crisis of overproduction is the most strik- g example of the limits of the bourgeois mode of produc- on, of its inability to give scope to the development of the oductive forces, to technical progress.

Marx pointed out that under capitalism "the limits of pro- uction are determined by the profit of capitalists and not the needs of the producers."(39)

Millions of families in the United States live in slums. It well known that the United States does not experience a ortage of building materials and has many unemployed nstruction workers. Nevertheless the construction of new using advances at a turtle's pace and the housing problem comes more and more acute with each passing year.

hy? Because housing construction is mainly a problem of increase in the profits of the building owners. Bourgeois ciety does not want and cannot produce or build more than n be realized with profit, and under conditions of capital- t monopolies — monopolistically high profit. Bourgeois litical economy praises capitalist profits as the best imulus for technical progress and the limitless growth of oduction. But it is silent about the fact that capitalist ofit is a result of the destruction and exhaustion of labor wer, of plundering exploitation of natural resources, that e subordination of production to the principle of capitalist ofit is not only a stimulus, but also a limit of capitalist oduction. Capitalists, especially under present conditions, equently limit production, delay technical progress, pre- r military production to the development of peaceful pro- uction for the sake of an increase in the rate of profits.

prominent American historian and sociologist, Jerome avis, called it an astonishing paradox that in spite of the ge natural resources and technical achievements of the nited States millions of men in that country live in poverty. e wrote: "The mystery of this astonishing paradox is hid- en mainly in the capitalist system. It is strange, but the m of its production process is not the production of things, t the production of profits. Natural wealth is not used for e welfare of the whole people: It is an object of fierce ruggle for monopolistic control."(40)

Gigantic production capacities out of action and a mass my of unemployed; these became chronic phenomena be- nning with World War I. These facts are explained sci- tifically only by Marxist-Leninist political economy.

Critics of Marxism rhapsodize about the latest changes the economy of the capitalist countries. However they ss in silence or deny the genuine and very important anges that have taken place in the capitalist world in the st 40 to 45 years. The facts show that beginning with orld War I capitalism entered a phase of deep decay, that e inner forces of capitalism during the period between the o world wars became greatly weakened. According to lculations of the United States Department of Agriculture e losses from unemployment during nine years (1930 to 38) amounted to 293 billion dollars (in 1929 dollars). The ge size of these losses is especially striking if we com- re them with the whole national income of the United ates in 1929 — it amounted to 81 billion dollars.

After World War II the decay of world capitalism contin- ued. Its general crisis became sharper to an unheard of degree as a result of the formation of the socialist system of world economy, of the break-down of the colonial system of imperialism, and the intensification of the unequal development of the capitalist countries.

Lenin stated at the end of 1921: "Large-scale industry either is suffocating and creating unemployment in the most flourishing and rich victorious countries or is preoccupied with manufacturing shells for the extermination of men."(41) The capitalism of our days succeeds in creating unemployment and manufacturing shells. In spite of the tremendous scale of militarization, the problem of unemployment in the United States, according to the admission of George Meany, President of the AFL-CIO, has again become problem Number 1 of the United States. Quite recently the bourgeois economists affirmed that the wealth of the capitalist monopolies was a problem before which all other problems retreated into the background. For example, Galbraith, a well-known American bourgeois economist, wrote: "The social inefficiency of a wealthy community grows with the growth in wealth that goes far to make this inefficiency inconsequential."(42)

A Venetian monk, Oretes, who was characterized by Marx as one of the greatest economic writers of the 18th century, understood that the "great wealth of the few is always combined with the absolute plundering of necessities from the incomparably larger number of others."(43) Galbraith does not understand this. Evidently, the bourgeois economists of today are able to feel the significance of the "social insufficiency" of capital only during the period of crises when this significance appears on the surface especially clearly.

The vitality and the irresistible power of Marxism-Leninism is confirmed by the historical experience of many years. In spite of the fierce attacks of the apologists of imperialism, reformists, and revisionists of Marxist-Leninist theory, it is spreading more and more widely among the toiling masses of the entire world. Marxism-Leninism throws light on the road to communism for all peoples.

FOOTNOTES

(1) Marx and Engels, Selected Works, Vol. I, 1955, p. 318.
(2) G. D. H. Cole. "Capitalism in the Modern World." London, Fabian Society, 1957, p. 16.
(3) G. D. H. Cole, The Post-War Condition of Britain, London, 1957, p. 43.
(4) Marx and Engels, Selected Works, Vol. I, p. 403.
(5) John Strachey, Contemporary Capitalism. London, 1956, p. 64.
(6) Ibid.
(7) Marx and Engels, "Works," Vol. 15, p. 290.
(8) John Strachey. "Contemporary Capitalism," pp. 129-130.
(9) G. D. H. Cole, "The Post-War Condition of Britain," pp. 83, 88
(10) G. D. H. Cole, "The Post-War Condition of Britain," p. XXII.
(11) R. O. Boyer and H. M. Morais, "Labor's Untold Story," 1957.
(12) Ibid.
(13) "Federal Reserve Bulletin," December 1957, p. 1404.
(14) Marx and Engels, "Selected Works," Vol. I, p. 406.
(15) V. I. Lenin, "Works," Vol. 21, p. 47.
(16) John Strachey. "Contemporary Capitalism," pp. 139-140.
(17) Ibid. p. 161.

(Continued on Page 30)

Academician S. Strumilin:

Some Problems of the Further Development of the Kolkhoz Regime*

The MTS reorganization law, being one more step on the way to communism, throws new light on important problems concerning further development of the kolkhoz regime. Until recently the question how the two different forms of socialist property — state and kolkhoz-cooperative — in Soviet agriculture would come closer together had remained unclear. However, in the last three or four years our experience in this field too finds more and more practical roads to further forward movement.

The complete collectivization of the Soviet villages was a tremendous victory for the socialist revolution. Any technical progress was impossible without it on the dispersed individual farms and, consequently, the solution of the problem of how to obtain an abundance of agricultural products in our country was also impossible. But the process of development of collectivization on the collective farms cannot be considered to be completed. If we forget about the quantitative growth of the kolkhoz system and turn to such qualitative indices of success as yields, labor productivity and costs of the basic products, we have to admit that our advances here, unfortunately, cannot be compared with the successes in all other branches of labor.

It is true that during the period of mass collectivization of the Soviet villages, between 1928 and 1956, the power base of USSR agriculture has been greatly strengthened, peasant horses have been in the main (more than two-thirds of them) replaced with cheaper and more powerful mechanical means. The increase of the power supply in agriculture may be seen from the following data (they are, admittedly, approximations):

Power supply in USSR agriculture(1)

	1928	1940	1950	1955	1956
draft animals in millions of HP	20.2	10.6	7.3	6.6	6.3
mechanical prime movers in millions of HP	1.1	36.9	55.0	100.6	110.8
total by the end of the year, in millions of HP	21.3	47.5	62.3	107.2	117.1
the same as percentages	100	223	292	503	550
labor power in millions of man-years	27.4	31.0	24.7	33.4	33.5
HP per worker	0.78	1.53	2.52	3.21	3.50
the same as percentages	100	196	323	412	449

As may be seen from this table, the power base of agriculture increased 5.5 times in 28 years. According to our calculations the labor force during the same period increased only by 22% and the supply of power per worker 4.5 times. However, according to the available data, labor productivity in agriculture increased only 3.8 times since 1913.(2) This, of course, is a lot. However, if we take into consideration that only between 1928 and 1956 the labo productivity in railroad transportation increased 4.52 time in construction 4.9 times and in industry 7.26 times, while since 1913 it increased about 9 times, then the lagging of agriculture behind other branches of socialist labor must be considered substantial.(3) And now that our country is completing the construction of socialism, is making a gradu transition from socialism to communism, this fact deserve our greatest attention.

It is true that in prerevolutionary Russia agriculture was the most backward section of the whole economy. Yet there is no logical reason why under socialism, when we are tryi so carefully to raise the general level of all the most backward regions and sections in our country, this tremendous agrarian section of our economic front, where up to 43% of the whole population of the USSR is occupied, is lagging more and more behind the general level instead of being raised to that level. If we consider that the productivity of labor on the collective farms is significantly lower than on the state farms, being, so to speak, the weakest link of the backward agrarian front of our economy, than it becomes clear that in the field of the development of the kolkhoz regime we have especially important and responsible tasks

Our lagging on the agricultural front can to a certain degree be explained by the neglect of the objective requireme of the law of value where the villages and cities come into contact; by direct mistakes in the formation of prices of agricultural products; by excess centralization in planning the whole kolkhoz system for the whole country, as well as by harmful administrative ordering at the lower echelon All these defects are consistently being corrected everywhere and may be considered, in the light of the measures taken by the party and the government in recent years, as a past stage of our economic practice. Yet the past cannot be completely forgotten and the mistakes of the past sometimes offer useful lessons for the future. A steep rise in USSR agriculture in recent years shows that the lessons of the past have been taken into consideration.

Up to the present time we did not consider the kolkhoz artel as the highest stage in the development of the kolkhoz regime. It was assumed that a kolkhoz is the next transitional stage to the future commune which was imagined in the form of the first communes of 1918-1919, as something very limited in scale, a semi-natural economy of the consumer type, something like a large family where every member receives from the common fund according to his needs. However, as the communist principle of distributio presupposes inexhaustible sources of abundance, its realiz tion in the kolkhoz village which has been the most backwa section of the socialist economy would be a most absurd idea. Such communes, even if they continued to exist for

* A statement of the problem.

ome time, would be only a parody of real communism. Be-
ause of this the transformation of the collective farms in-
o communes, of course, was impossible in practice and was
elegated to the indefinite future. And the further develop-
ment of such intermediate and very primitive economies
topped in their development half way to their goal, and for
uite a time appeared absolutely without any future.

The idea that agriculture under communism may be a
nechanical association of a mass of disconnected producing-
onsuming communes sharply different from each other in
evel of development was radically wrong. As a result of
atural-climatic, soil and all kinds of other differences,
ollective farms now differ greatly in their economic
trength and prosperity. And though this is inevitable for
ome time we cannot consider an ideal communist society
regime in which the rich leading communes compete with
ackward communes — this would be absurd. Collective
arms with incomes counted in millions, having become
ommunes, would continue to build for themselves new
ower stations, brick works and palaces of culture, becom-
ng richer and richer, while backward communes would
ontinue to stand still, their development being dependent
pon the vagaries of weather — drought etc. It is quite
lear that communism cannot be reconciled with conditions
n which with equal expenditures of labor, one labor collec-
ive enjoys abundance and another remains far behind.

Only in utopian anarcho-syndicalist imagination can com-
nunism be built on a basis of isolated, dispersed labor
ommunes which, as collective owners of the plants or
arms, enter into contract relations with each other for the
nutual exchange of products and services.

Let us note that in the USSR there are hundreds of thou-
ands of enterprises. It is clear that the very raising of
he question shows its absurdity: we would have to build
ommunism by uniting industrial enterprises and agricul-
ural communes on the basis of the natural exchange of
roducts and services of all kinds. Such an idea is fantastic
nd moreover is a reactionary utopia. Communist social
roduction can exist, develop, and function smoothly as a
lock, only if it is guided as a unit by one master. And such
master of all the means of production can be only the
hole national collective. Of course, this presupposes the
reatest flourishing of the creative initiative of all workers'
ollectives at each enterprise.

What then are the conclusions for the future development
f our collective farms?

Let us first make some preliminary remarks.

First about the process of reducing the number of collec-
ive farms. As late as 1940 there were 237,000 collective
arms in the USSR with a total sown area of 118 million ha.
ately, among other important measures carried out by
he party and the government in the kolkhoz sector of agri-
ulture there was a considerable merging of collective
arms. While the total sown area of the collective farms
etween 1940 and 1956 rose to 152 million ha, an increase
f 29%, the number of collective farms went down to 84,800
– was reduced almost three times. The number of house-
olds per collective farm increased at the same time from
1 to 238, or about three times; the sown area increased
rom 492 ha to 1,800 ha, an increase of 3.75 times, though
he expenditure of members' labor per ha of sown area
uring the same years was reduced by 7 or 8% in spite of
he fact that the area under technical cultures which re-
uire more expenditure of labor than grain cultures, grew
aster than the area under grains. Undoubtedly, this shows
he success of the measures carried out. Yet a comparison
ith the state farms shows that even now the state farms
re almost four times larger than the new collective farms.
On the state farms cultivation of 1,000 ha of sown area re-
quires no more than 64 men, while on the collective farms
no less than 184 workers are needed or three times as
many, even if we exclude the labor power of the MTS serving
the collective farms. There is no doubt that with the strength-
ening of the collective farms and the more rational use of
labor they will not need such an enormous amount of labor
power. And when this becomes apparent, a new problem
will arise: what to do with the surplus labor power on the
collective farms? Members of the collective farms are not
manual workers or office workers whose surplus is easier
to transfer from one plant to another where they are most
needed: they are full-fledged members of this particular
collective farm; they cannot simply be freed from their
honorable duty.

The next question is that of cost accounting and the de-
velopment of commodity-money relations on the collective
farms. The present size of the enlarged collective farms
should be considered sufficiently large for the organization
of a quite rational large-scale socialist economy. However,
in order to achieve this, they should ensure the possibility
of effective cost accounting which has become the most
important condition for our economic success in all other
branches of labor. Given a commodity economy such ac-
counting can be realized only in the form of money control,
that is, when all expenses of production and circulation of
economic goods and the final results of their realization
for each business period are expressed in money. The So-
viet ruble has fully justified its role in the service of so-
cialist construction in a very large area of application. It
must be assumed that there should be no obstacle for its
wide application without limitations in the sphere of kolkhoz
production. It is also understood that the more stable our
Soviet full-valued ruble — our etalon and a measure of our
success through the method of cost accounting, the more
reliable is cost accounting. But it so happened that our
kolkhoz sector developed for quite a time under conditions
where natural or seminatural relations played a very great
part. This made impossible the application of cost account-
ing.

As is known, the payment of labor on the collective farms
was mainly in kind, without any estimate of payments in kind
in terms of money. Payments in kind for the services of the
MTS out of the kolkhoz harvest were also made without any
monetary evaluation. An estimate of the expenditures of
production or the value of the products obtained on the col-
lective farm in general was not made. Even the possibility
of such an accounting up to recent years was doubted by our
agrarian economists in theory and in practice. The monetary
incomes of the collective farms from the sale of their prod-
ucts, even the gross income before deducting expenditures,
as recently as 1952 amounted, according to CSA calculations,
to the very modest amount of 42.8 billion rubles for the
whole Soviet Union. However, the authors of these estimates,
while mentioning that the value of the part of the income dis-
tributed in kind was considerably larger than the monetary
incomes of the collective farms, yet did not even attempt
to estimate how large the whole income of the collective
farms was, the gross and the net income. And if this was
beyond the resources of such a strong statistical apparatus,
such a task was certainly beyond the modest resources of
the collective farms. However, without knowing the most
elementary results of their farms' activities, it was im-
possible even to speak about cost accounting.

Not knowing what is the actual cost of kolkhoz production,
we cannot correctly estimate it under a planned economy.
It is true, the prices of village products were even more
varied than was necessary, but this multiplicity of prices

did not help our ruble in the villages which was to serve as a measure of value, it helped the collective farms even less. For example, quite naturally, the purchasers of grain, in view of the existence of various prices of grain, preferred the lowest of them. The results were not only reflected in the economy of the collective farms. As the prices of kolkhoz grain were lower than they should be, the products of the state farms could not be paid for at full price. These shortcomings in the formation of prices necessitated some others. In spite of all their advantages, the state farms were not sufficiently profitable. Subsidies were paid to them from the budget, though if one would consider the accumulations made through the turnover tax, their losses were clearly imaginary. Nevertheless this circumstance prevented the application of cost accounting on the state farms for many years. The net result of all this was that not only the kolkhoz sector, but all Soviet agriculture could not use the advantages of cost accounting.

The majority of these shortcomings were revealed in the last period and to a substantial degree corrected. The prices of agricultural products were radically reexamined. And, of course, it is not an accident that the money income of the collective farms between 1952 and 1957 increased from 42.8 billion rubles to 94.5 billion rubles, or 2.2 times in five years. An important innovation also is payment in money for labor of kolkhoz members. Expansion of this sound practice in the collective farms not only brings closer labor payments to conditions existing on the state farms, but increases the marketable portion of the kolkhoz product, because the members of the collective farms through their money wages become purchasers of kolkhoz products and this means a decisive step in the direction of the disappearance of the natural economy on the collective farms. In our opinion this process in the future should be accompanied by corresponding reform in the field of kolkhoz taxation in order to overcome completely the seminatural relations on the collective farms which are clearly an anachronism under a developed socialist money economy.

The most important achievement of the last years is, in our opinion, the general recognition not only of the possibility, but of the necessity of organizing cost accounting for all kinds of kolkhoz products on the collective farms. This will open the road to the realization of cost accounting in this branch of socialist economy which needs it most of all.

Only through constant application of the normal cost accounting on the collective farms shall we, by the way, get a clear picture of all sources and elements of differential rentability through the labor efforts of the kolkhoz members as well as through the free forces of nature. This will open the road to more rational taxation in money and direct withdrawal as a "product belonging to the whole society" of elements of the land rent directly from where they are created, increased or decreased through objective causes which are independent of the producers' efforts. At present such elements are "caught" through the zonal prices of the procurement products and through other methods only in the average standards established for all zones of our country. But the average standards are applied without considering particular conditions. A good accounting system determining the income of each farm will make it possible to consider the circumstances of each particular farm, so that the farms which have no income or little income would pay no taxes while those with high incomes would contribute the surplus from their rents not only for the replenishment of the Union contingency reserves, but also for the formation of insurance and other contingency funds, for example, for undoing the results of natural calamities or for pulling up the lagging collective farms or paying bonuses to better farms throughout the kolkhoz system.

However, before the formation of the organizationally united system out of the aggregate of existing collective farms we have to solve gradually a number of problems which are — in principle — important.

As it is known, for some time the question of the relationship between the collective farms and the MTS has been an urgent one. When the number of MTS, compared with the number of the collective farms, had been small and each of them had served the whole kolkhoz district with its tractors as a center of power, the connection between the collective farms and such a center had been seasonal and of a more limited character than it became later. But after the merger of the collective farms their number was reduced three times while the number of MTS since 1932 increased more than three times. 25 years ago one MTS served 86 collective farms, but now it serves only about ten collective farms. But these are averages. They are important not in themselves, but as a reflection of the tendency of development. In the Stavropol region in 1957 158 MTS served 180 collective farms and 41 MTS each served only one collective farm. The role of the MTS increased especially since the staff of the MTS included not only tractor drivers, but also agronomists serving the collective farms. The connections between the MTS and the collective farms became more and more organic. At the same time — and this is very important — collective farms have become stronger economically and wealthier and they are able themselves to solve problems which formerly were too large for them. At the same time the question of who in this economic complex of the MTS and the collective farms was the real master, the board of the collective farm or the director of the MTS and its agronomists, this question became more and more important.

As the means of production on the collective farms and the MTS belong to different owners, many specialists tried to consider this complex as two different independent entities. The CSA, for example, beside calculating the product of the collective farms, determined also the product of the MTS, namely that part of the kolkhoz product which was paid to the MTS in kind for their services to the collective farms. Such double counting of the same part of the crop in the total results of agricultural production — on the collective farms and on the MTS — could be made only on a purely formal basis. Some economists, who asserted that the MTS did not contribute to the national income any special product and that in this case the question is only which part is that of the MTS and which of the collective farm in the product they produced through their common effort, such economists were right. First of all the existence of two or more co-owners in the same economy does not preclude its completeness and unity, if this unity is the result of the unity of the production process and common interest. Properly speaking, even those collective farms which are not served by the MTS, use, beside their own "indivisible funds" also the basic land fund which is the property of the socialist state. Thus it is clear that the two forms of property are present here and it is quite clear that the economy itself cannot be dismembered. If the collective farms without MTS help could still function, though much less efficiently, the MTS, without use of their equipment on the fields of the collective farms, would lose their economic raison d'etre. By destination the tools of the MTS are an inalienable part of the kolkhoz fields. And inalienability of the MTS machines from the collective farm land is the best argument for the organic merging of these two elements into one complex.

The practice of recent years, leaving behind theory, persistently searched for ways to free the kolkhoz economy rom the inconvenience of having a surfeit of masters. The ituation was very picturesquely presented in a journalistic ssay by Ivan Vinnichenko.(4) The people working in the ields also insisted that "We should not continue to have two nasters on the same field!" The dialectics of development, hich created new production possibilities, could not be econciled with obsolete forms of work on the collective arms and sought new forms. And the practice of selling nachines to the collective farms, which has already begun, s the proper way to overcome this contradiction. The grad- al transition to the second phase of communism is exert- ng its influence.

A tendency to have one master on the collective farms ad been observed in practice even before that. The weakest ollective farms, which could not ensure normal pay for he labor days of their members through their incomes, ished to be transformed into state farms, where there is ne master and where wages are fully guaranteed. At the ame time some of the richest collective farms such as udenny collective farm or the Stalin farm in the Odessa egion acquired their own large machine bases and became ndependent of the MTS. In Latvia and Estonia attempts ere made to overcome the existence of two masters in the nanagement of the collective farms through renting the ecessary number of machines by the collective farms rom the MTS. In other regions single "complex" tractor- ield brigades were formed for the same purpose, consist- ng of the workers of the MTS and collective farms. In ome cases this problem was solved through the method of "personal union." Thus, the members of a backward col- ective farm in the Stavropol region elected as their chair- nan the director of the MTS and were quickly pulled up. n another case the chairman of a collective farm was at he same time the director of the MTS serving this collec- ive farm. There were also cases when leading chairmen f the collective farms, such as T. F. Maltsev and M. A. Posmitny, having succeeded in obtaining transfer of the MTS tractor brigades with all their machines to the full isposal of their collective farms, mastered the new duties ery well without any mentors.

All these varied manifestations of the urgent need to put n end to the existence of two masters on the collective arms show that the collective farms in the recent years ave quickly grown up and are ready for autonomous activ- ty based on cost accounting. The educational role of the MTS which they had performed on the collective farms was ery useful. But adults do not need nurse-maids. The same nay be fully applied to the collective farms. Democratiza- ion of management in industry and agriculture, carried ut by the party, is unquestionably timely. The new law is olving the problem of reforming the collective farms not hrough increasing differences between kolkhoz property nd the property of the whole people, but through a gradual aising of the kolkhoz property to the level of property of he whole people.

One of the differences between collective farms on the ne hand and the MTS and the state farms on the other was onsidered to be the existence of the so-called indivisible unds. Their total amount for all collective farms at the eginning of 1957 was no more than 98.9 billion rubles for 3.5 million able-bodied members of the collective farms, r less than 3,000 rubles per member. Such an accumula- ion should be considered relatively modest. As a compari- on we may note the 141.4 billion rubles invested by the tate in the state farms and the MTS as of January 1, 1957, r more than 24,000 rubles per worker, the total number of manual and office workers employed by them being 5,829,- 000. Investments in industry (in prices of 1955) on January 1, 1957, were even higher: more than 44,000 rubles per worker. All these funds were created by the workers themselves — the members of the collective farms, the workers, the people as a whole. But while every workers' collective inside the state sector considers itself the master of the funds of that sector on an equal basis with every other citizen of the Soviet Union, regarding these funds as the property of the whole people, in the kolkhoz sector such a situation in respect to the means of social labor has not yet been achieved by far. And this very important defect of kolkhoz construction should be finally overcome.

It is very good that the collective farms, after the purchase of machines, will increase their indivisible funds in some two years from 100 billion rubles to 120 billion rubles, because their socialist property will increase. But this is not sufficient for competition with the state farms for higher productivity of labor. In order to achieve that, the kolkhoz funds should be increased several times. However, in order to build communism we need not only quantitative, but also a qualitative increase and improvement of kolkhoz property. As N. S. Khrushchev said in his report to the first session, fifth convocation of the USSR Supreme Soviet "this means that gradually the level of collectivization of kolkhoz property will be increased and in this way raised to the level of the property of the whole people." The merger of the collective farms that had been carried out was only the first step in that direction.

Limiting ownership of the indivisible funds of the collective farms and the entire kolkhoz property to a narrow group, a narrow circle of persons working inside a given farm, placed members of the collective farms into very unequal conditions of labor competition with each other, because the differential rent of the different collective farms is determined frequently to a much greater degree by local natural differences than by the quality and amount of labor applied. This means that we should ensure a logical application of the socialist principle: "To each according to the amount and quality of work."

There is a very good method of approaching this goal. Lenin foresaw it as early as 1918. In his work "Next Tasks of the Soviet Power" he wrote that "A socialist state can emerge only as a network of producing-consuming communes..."(5) At the same time he set as a task of socialist construction uniting all this network in due time into "a single cooperative guided by the proletarians."(6) As we know, under conditions of capitalism, isolated labor communes also appeared here and there, but inevitably they either fell apart or were transformed into "unions of small capitalists." In connection with this Lenin's genius even then assigned quite a new role for cooperation under conditions of Soviet power. He wrote: "Since the conquest of state power by the proletariat, from the moment that proletarian state power began a systematic creation of socialist order, the position of the cooperatives changed radically and fundamentally. Here quantity is transformed into quality. A cooperative as a little island in the capitalist sea is just a store. A cooperative which embraces the whole society in which land is socialized and plants are nationalized is socialism."(7)

Comrade N. S. Khrushchev in his report concerning the further development of the kolkhoz regime, speaking of the two forms of the socialist property and their development, reminded us about this statement of Lenin.

At that time the great kolkhoz movement had just begun. But even at that time the completion of collectivization was imagined in the form of a single cooperative embracing

the whole of society or, at least for the start, the whole kolkhoz population of the Soviet villages. Would it not be advisable in the future, earlier or later, for members of the collective farms, at their own initiative, to unite within the boundaries of the whole region or the whole republic and then within the boundaries of the whole USSR — like the Central Union of Consumers' Cooperatives (Tsentrosoyuz) does at present — into a single system of productive cooperatives of rural areas?

During the general discussion of the question concerning the further development of the kolkhoz regime suggestions were advanced in that direction. They also found a place on the pages of the theoretical organ of our party (8) and in the press in general. It is planned to summon next year the Third All-Union Congress of kolkhoz members, but it cannot pass on such a big question as the problem of the future of kolkhoz property in our country. In order to avoid hasty decisions, it is advisable to start the discussion concerning this great problem before the congress and to think about it in all its magnitude.

Joining the isolated collective farms into more powerful regional or zonal unions is dictated by many weighty considerations.

To start with, it would help in the organization and rational use of such concerns as interkolkhoz power stations. The larger the stations, the cheaper the power produced by them. But individual collective farms are too weak to build large stations, while a union of collective farms could solve such a task easily. Also such measures as irrigation of dry regions and drainage of swampy zones, protective afforestation and the struggle with the erosion of soil are absolutely beyond the capabilities of individual collective farms, while regional or republican unions of collective farms could carry out such works of melioration with great success to the common advantage of all interested collective farms.

But even the regional or zonal unions cannot insure collective farms from such natural calamities as drought or untimely rains, which may result in heavy crop failures in the whole region or even republic. However, usually a failure in one region is balanced by a better crop in others, and any natural calamity would be no threat at all for the whole kolkhoz system united by mutual obligations on the territory of the whole Union and possessing insurance funds for such purposes. This circumstance alone dictates the necessity for the collective farms to unite not only into regional unions, but in wider, all-Union associations.

There are also other considerations. The collective farms of different geographic zones and regions from time to time — some more often, some less often — suffer from various natural calamities. Conditions of labor and life are extremely varied because of the natural conditions and in many other respects. They have different climates, different soil fertility, different amounts of land available. As a result, the average expenditure of living labor per ton of winter grain, according to the data of 1937, in the Krasnodar region was less than 4.6 days, while, say, in the Kalinin region it exceeded 30 days.(9) Thus the cost of grain in the Kalinin region was six times as high as on the collective farms of the south and the southern collective farms have higher incomes than the northern. This inequality results in a differential rent of individual collective farms on such a scale that the results contradict the principle of socialist production and distribution: from each according to his ability, to each according to his labor. But this contradiction can be easily removed if the boundaries of the kolkhoz property were removed to make one union on a republic or all-Union scale the aim of which would be mutual help and bringing forward by all means the backward kolkhoz sectors to the level of the best.

The entire land cultivated by the kolkhoz members is the property of the whole people and if some sectors produce more because of natural conditions, these surpluses should be considered the property of the whole people or at least of all collective farms. We must only find methods of redistributing these surpluses with the greatest effectiveness for the kolkhoz regime and with the greatest ease. And the first thing that comes to my mind is this kind of consideration: no collective farm is at fault if the land it has is much worse than that of the majority of collective farms. Yet we know that there is no poor land which is incapable of improvement with the help of science and agricultural technique. If so, then the collective farms united into one organization could use the excess of the land rent from the best land for the improvement of the soil of the worst lands and in this way equalize the conditions of work for the whole kolkhoz front.

Such an organization would unite all the productive resources of the collective farms, strengthening them and helping not only the best sectors to advance but the whole agricultural front of the Soviet Union. This would not require any further mergers of the existing collective farms. Each of them could be given for perpetual use not only the land but also available indivisible funds, forming through current accumulations also a number of insurance and contingency funds for depreciation and modernization of obsolete technical equipment where this is needed, and for other purposes, but not just for a given locality, but for the whole republic or the whole Union. The property in all these funds of the kolkhoz system as a whole, for the whole USSR, under such conditions would be in perspective little different from the property of the whole people. This would make easier not only strengthening the resources of the kolkhoz system with the resources of the MTS in the united balance of such united republican organization of the collective farms, but a wider union in the future, in the process of the transition to communism, of the whole system of the collective and state farms into one system. Further development of the collective and state farm systems would show the specific advantages of each of them in the transition to the future organization of management in agricultural production.

Such a union of individual collective farms into a single system in each region, republic and the whole USSR would ensure for them first of all the possibilities of mutual help. The creation of a huge insurance fund on an all-Union scale even now would guarantee the whole system of the collective farms from any mishaps or surprises of nature. The accumulation of sufficient contingency funds for the improvement of natural conditions and the modernization of agricultural technique in the most backward sections of the kolkhoz front would make possible the levelling of the natural economic conditions of the economy in various regions of the Union through collective mutual help. At the same time the kolkhoz centers organized in the regions and republics would take upon themselves functions of regional servicing of the kolkhozes and their supply with everything they need as well as centralized marketing of their products.

Of course, within the limits of any organization of collective farms there will remain differences in rent. In the competition for higher labor productivity it can be utilized for the encouragement of the best productive collectives. As is well known, high productivity is determined, however, not only by the quality of labor, but also by the higher level of technique and the bounties of nature. This part of the product belongs to society. In this respect in the kolkhoz

ystem of economy it would be necessary to determine hrough negotiation not only the standards for guaranteed abor payment in all collective farms but also the just dis-ribution of accumulations among contingency funds depend-ng upon the different levels of labor productivity and rent f individual farms. Let us assume, for example, that the verage rate of accumulation on the collective farms mounts to 75% of the total fund for guaranteed labor pay-nent to all members and that it was decided to place 50% of nat accumulation into local indivisible funds of the collec-ive farms and funds for bonus payments for the best work-rs, while the other half was to be transferred to the repub-ican (or regional, as the case may be) and all-Union con-ingency funds — insurance, melioration, and other pur-oses — for use in the interests of the whole system and or bringing the lagging sections to the general level. On he collective farms with the highest rent (the causes of vhich may be various) out of accumulations above this rate certain percentage, say not more than 20, could be ap-priated for local cultural needs (clubs, reading rooms, sports stadiums etc.) and the rest would be transfered to the republican and all-Union funds for all-Union needs.

As an illustration of such a redistribution of the differential rent of the collective farms we give the following grouping of collective farms in terms of labor productivity.(10)

As we see, in spite of the same expenditure of labor, the yields and the amount of products obtained per unit of labor are very different because of the different qualities of soils, weather conditions, and other circumstances. But the social value of any product is determined not by individual expenditures of labor in some particular form, but by the average standard of such expenditures for the whole circle of farms producing this product. Hence differences in the rent of such farms. Of course, not the whole excess of the rent of individual farms as compared with the average standard of accumulations for all farms (S:V) can be considered a result of the fertility of soil and other bounties of nature. Some part of this excess is due to the different quality of living labor. Because of this the theory keeps strictly apart the two forms of differential rent — differential rent I, the result of the free factors, and differential rent II, the result of additional expenditures of labor. But in life these two forms usually go hand in hand and it is difficult to separate them strictly. Moreover in the interests of stimulating high labor productivity it is advisable to encourage higher yields whatever are the factors that bring them about. Grouping individual collective farms according to labor productivity (under conditions of economic accounting and full economic autonomy) makes it possible to find out not only the strongest members of the kolkhoz system, but also the weakest ones. Whatever the causes of lagging — whether organizational defects or natural factors — they retard the general movement toward communism of the whole kolkhoz system. That is why we should put an end to such lagging through the general efforts of the whole system gradually, as the contingency funds are accumulated. Grouping the collective farms by their labor productivity will also show in which weak groups of collective farms the meliorative or agrarian-technical modernization should be applied first.

In this connection special attention should be given to the weakest group — the collective

groups of collective farms	productivity of labor	product in kind	expenditures of the collective farms	
			material-C	payment for labor-V
	1	2	3	4
model	160	80	75	50
leading	120	120	150	100
successful	110	220	300	200
rank and file	100	300	450	300
lagging	90	180	300	200
weakest	80	80	150	100
working at a loss	40	20	75	50
total	100	1,000	1,500	1,000

groups of collective farms	accumulation - S		the value of the product	
	according to the standard - 75% V	actual (col. 8 minus the sum of cols. 3 & 4)	individual (the sum of cols.3, 4, 5)	social (the sum of cols. 3, 4, 6)
	5	6	7	8
model	38	135	163	260
leading	75	140	325	390
successful	150	215	650	715
rank and file	225	225	975	975
lagging	150	85	650	585
weakest	75	10	325	260
working at a loss	37	-60	162	65
total	750	750	3,250	3,250

farms working at a loss. The collective farms which cannot ensure even the usual guaranteed payment for their members' labor, undoubtedly, need reorganization and a radical improvement ahead of others. But this requires plenty of means and time. Yet the direct losses absorb the circulating means of such collective farms and at the same time make it impossible to continue their functioning even at the volume level of simple reproduction of their resources. Independently of other measures which can be token, such losses may be in the first place reimbursed from the special insurance funds of the regional or republican organizations. All attempts to cover these losses through lowering the guaranteed payment to the members of the farm are impractical because the losses are determined after the guaranteed payments have already been made. Moreover lowering payments for labor would lower productivity and is in contradiction with the purpose of socialist economy.

Taking this into consideration we may present the distribution of the current accumulations in the kolkhoz system in the following table.(12)

groups of collective farms	accumulations of the collective farms-S		allocation for contingency funds	
			individual collective farms	
	in the limits of an average norm	above the norm	50% of the norm	20% above the norm
	1	2	3	4
model	38	97	19	19
leading	75	65	37	13
successful	150	65	75	13
rank and file	225		113	
lagging	85		43	
weakest	10		5	
working at a loss	-60			
total	523	227	292	45
			337	

groups of collective farms	allocations for contingency funds				total accumulations
	regional unions		all-union funds		
	30% of the norm	40% above the norm	20% of the norm	40% above the norm	
	5	6	7	8	9
model	11	39	8	39	135
leading	23	26	15	26	160
successful	45	26	30	26	215
rank and file	67		45		225
lagging	25		17		85
weakest	3		2		10
working at a loss	-60				-60
total	114	91	117	91	750
	205		208		

As may be seen, the losses of individual collective farms in this table are covered with the help of regional (or republican) insurance funds. The losses from natural calamities, such as drought or flood, which strike the whole region or republic would have to be covered, of course, with the assistance of the all-Union insurance funds of the kolkhoz system. Withdrawals of the surpluses of that part of kolkhoz rent which is not based on labor, but is due to the bounty of nature, reach 24% of the total sum of kolkhoz accumulations and their total for the whole country will be a very large amount indeed. Directing these withdrawals into republican or union budgets, as centralized "production for the whole society" we could with this tax on rent in due time replace other kinds of taxes which are more burdensome.

The transition from payments in kind to money payments which is taking place on a larger and larger scale on the collective farms shows that in many collective farms the level of payments still is lower than that of the state farms. This circumstance is favorable to the reform whose time has arrived, a reform which would ensure the mass of kolkhoz members the same level as that of state farms.

It is necessary to remark that under the new conditions the collective farms now have much more scope for the development of their initiative. It would be advisable also to expand the rights of the state farm personnel in guiding the farms. Shifting the center of gravity in industrial management from the center to the lower echelons has already been recognized as necessary for the realization of Lenin's principle of management which, as Comrade N. S. Khrushchev emphasized, opens boundless possibilities for the active participation of the masses in production management.

Of course, it is impossible to foresee precisely all circumstances and the exact time of closing the gap between the two forms of property in the Soviet economy. But the first steps we have taken in that direction allow us to say that we are on the right track. Given A, B has to follow; such is the logic of history.

(Continued on Page 30)

. *Manyakin:*

ollective Farms at a New Stage

The victory of the kolkhoz regime and its further develop-ent have radically changed the technical base of agricul-re in the Soviet Union. The power capacity of agriculture tween the period of mass collectivization and 1957 in-eased 5.5 times. Its structure has also been changed. The proportion of draft animals (in terms of mechanical ') in the total power capacity of agriculture before the so-alist reconstruction of agriculture amounted to 95%, while echanical prime movers made up a little more than 5% of e total. This situation has radically changed: the share of echanical prime movers in the power capacity of agricul-re now amounts to 94.6% and of draft animals only to 5.4%. a result of the growth of the power capacity the power pply per worker and the power supply to agriculture have creased many times.

	On peasant farms	On collective farms, MTS, state farms	
	1920	1940	1956
Total available power in HP:			
per worker	0.4	1.5	3.5
per 100 ha. of of sown area	19.0	32.0	54.0

The socialist transformation of agriculture and the growth its power capacity ensured a considerable increase in la-r productivity. As compared with the prerevolutionary riculture (including landlords' estates) the productivity of bor on the collective farms, MTS, state farms and other ate auxiliary agricultural units increased about 3.8 times 1956. Though the part of the population engaged in agri-ture in the total population as compared with the prerevo-ionary period has fallen almost by half, the marketable oduct of this branch of the economy increased several times. r example, the marketable product in this branch of the onomy increased almost three times as compared with 1913, year of the highest yields before the revolution: wheat — e times, raw cotton, sun flowers, and vegetables — six nes; sugar beets and potatoes — almost three times; milk d wool — three times; meat — was almost doubled. Especially great successes were achieved by the collec-e farms, MTS, and state farms after the September (1953) enum of the CC, CPSU. The party and the government in-sted in agriculture during 1954-1957 (for the construction production buildings and structures, and as payments for ctors, machines and equipment) 75.4 billion rubles or billion rubles more than the investments for these pur-ses during the Second, Third, Fourth and the first three ars of the Fifth Five-Year Plans taken together (in com-rable prices). About 1.7 million tractors (in terms of 15 tractors) and more than 450,000 grain combines now erate in agriculture, while at the end of 1932 there were rrespondingly 148,000 and 14,000.

Socialist agriculture received especially large numbers of ctors, combines, trucks, and other machines in the last four years as compared with the preceding four years (data given below are in thousands):

Years	1950-1953	1954-1957
Tractors (in terms of 15 HP tractors)	603	908
Grain combines	180	293
Ensilage combines and corn combines	0.6	143
Trucks	270	467
Tractor drills	479	684

Tractors received by agriculture in 1954-1957 make up 54% of the whole fleet of tractors; grain combines — 65% of all combines; and trucks — 71% of the whole fleet of trucks in agriculture. This shows not only a great growth of the technical base of agriculture, but also its radical transformation. More than half of the tractor fleet in 1953 was made up (in terms of HP) of small tractors of old designs, using kerosene and gasoline, which are not particularly economical. The proportion of such tractors was reduced to 25% in 1957, the remaining 75% being more economical diesel tractors using inexpensive fuels.

Collective farms own a large number of capital structures and buildings, electrostations, repair shops, complex machines and equipment. At the beginning of 1957 they owned about 19,000 tractors, 162,000 mechanical prime movers and an enormous number of other agricultural machines and equipment. The collective farms own 330,000 cars or almost half of the cars in agriculture.

The growth of the collective production and the strengthening of the kolkhoz social property brought about a considerable growth of their indivisible funds and money income as may be seen from the following table (the data are in billion rubles on December 31, of the year):

	1932	1956
Indivisible funds	4.7	98.6
Total sum of money incomes	4.6	94.6
Money income per kolkhoz (in thousand rubles)	22	1,145
per kolkhoz household (in rubles)	311	4,763

The growth of the indivisible funds as well as the increase of state credits made it possible for the collective farms to strengthen the material-technical equipment of their collective economy, to increase capital investment and construction. Total money investment rose from 12.5 billion rubles in 1953 to more than 23 billion rubles in 1955 or by about 85%. The main part of the growth of the basic means of production is made of allocations from the money income for the replenishment of the indivisible funds. In 1940 the money income of the collective farms amounted to 20.7 billion rubles and out of it 3.3 billion rubles were allocated for the replenishment of the indivisible funds. The correspond-

ing figures for 1956 were 94.6 billion and 16.7 billion.

As the common economy of the collective farms strengthened and developed, the money incomes and incomes in kind of their members increased too. In 1957 the collective farms allotted for the distribution according to labor days 2.7 times more money than in 1953. Real income of the members of the collective farms, as compared with the laboring peasants of prerevolutionary Russia increased four times (in comparable prices per worker) and if we take into consideration free education, medical services, social benefits and other payments by the state, it increased six times.

In order to solve the problem of a sharp upsurge of agricultural production, of tremendous importance are the proper selection, placement and training of personnel. 36% of all chairmen of the collective farms are now graduates of special secondary schools and colleges and more than 90% of them are members of the Communist Party. At the beginning of 1957 360,000 agronomists, zootechnicians, veterinarians and other specialists with a secondary or college education were engaged in the collective farms, the MTS and the state farms, while in 1953 the number of such specialists was only 114,000. In 1953 34% of all agricultural specialists were found in organs of the administration; now this percentage is reduced to six. Numerous cadres of tractor drivers, combine operators, electricians, assemblers, brigadiers — leading men and innovators — were trained from among the members of the collective farms. More than 650,000 spcialists, brigadiers and managers of livestock farms and 322,000 chauffeurs work in the collective farms; 588,000 members are engaged in constant work in the mechanical shops and auxiliary concerns; more than 700,000 members work in the kolkhoz construction brigades. This is an army of specialists and skilled workers, whose labor does not differ essentially from the labor of workers in socialist industry.

Substantial changes took place in agriculture as a result of the successful realization of the program designed to bring about its sharp upsurge.

The sown area under various cultures in the last four years has expanded. If during 1950-1953 the sown area in the USSR increased by 17.5 million ha, in 1954-1957 it increased by 36.5 million ha. Parallel to the growth of the sown area the yields also were increasing and this ensured the growth of the gross crops. For example, the annual increase in grain production in 1954-1957 was 27%, sugar beets 37%, raw cotton 13%, fiber flax 91%, potatoes 14%, vegetables 39%. As a result of this the annual size of the procurement and purchase of grain in 1954-1957 increased (compared with 1950-1953) 22%; of sugar beets 36%; of raw cotton 12%; of fiber flax 98%; of potatoes 27%; of vegetables 81%.

The herd of cattle in the last four years increased by 10.9 millions (the number of cows, included in the above figure, increased by 6.2 millions), pigs by 11 millions, sheep by more than 20 millions. During the same period the number of cattle in the United States was reduced by 1.7 million. The number of sheep was reduced somewhat and the number of pigs increased by 6.5 million. Parallel to the growth of the number of livestock in the USSR their productivity was also increasing. In 1953 the average milk yield per cow on the collective farms was 1,016 kg. In 1957 it was 1,858 kg. The growth in numbers and the increase of the milk yield insured an increase in milk production in the USSR as a whole in the last four years of 50%, while the production of milk on the collective farms and state farms during the same period increased more than twice, though in the preceding four years the production of milk on the collective and state farms had increased by 64%. Milk production in the USSR in 1957 reached about 95% of the milk production in the United States, while the production of butter somewhat exceeded the production in the United States. The production of meat, wool, and eggs increased too. The volume of procurement and purchases of livestock products in 1957 increased by the following percentages (as compared with 1953): livestock 39, milk 92, eggs 63, and wool 42.

As is well-known, the January (1955) Plenum of the CC, CPSU, set as a procurement target in 1960 an increase, compared with 1954, of no less than 60% for meat, and no less than 80% for milk. In the last three years the procurement of meat in the Soviet Union increased 35% and of milk 81%. Thus the targets set by the January plenum of the CC, CPSU, for milk procurement for 1960 was carried out ahead of schedule (in three years instead of six years).

As a result of measures carried out by the party and the government our agriculture is advancing steadily. However we cannot rest on our laurels. Important new tasks are ahead in agriculture, the solution of which will bring about a further growth of agricultural production. The key role in that respect will belong, just as before, to the collective farms supplying by far the largest part of the marketable production. Below we give data for the share of the collective farms in the procurement and sale of agricultural products (percentages of the total supply):

Grain	above 70
Raw cotton	95
Sugar beets	98
Long staple flax	100
Meat	64
Milk	66
Wool	72

Collective and state farms produce almost 100% of the grain, sugar beets, fiber flax and raw cotton, 46% of the meat, 43% of the milk and 78% of the wool in the USSR and they are the main source of marketable agricultural products. The part of the total product which they sell to the market is almost as high as that of the state farms. For example, 59% of the meat and lard production in all categories of farms is marketed; but the percentage amounts to 98 on the state farms, to 91% on the collective farms and to 31 on the farms of individual owners. For milk the corresponding figures were 42, 89, 72 and 17; for wool — 85, 98, 97, and 44.

This means that the strengthening of the collective farms the improvement in the organization of their work, and the betterment of their material-technical base are the most important conditions for the further growth of agricultural production in the USSR.

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In the process of preparing and carrying out the program of mass collectivization, our Party found in the MTS, the most effective form of organizational ties between industry and agriculture and of rendering production help to the peasants by the state. The MTS played an important part in the development of the mass kolkhoz movement and the building of the modern technical base for agriculture. They were necessary forms of production-technical servicing of the collective farms at a certain stage of their development and fully justified themselves at a time when it was necessary to organize collective farms, to mechanize agricultural processes, to train machine operators, to carry out the political work of reeducation of former individual peasants in the spirit of collaboration and socialist mutual help, and to organize large farms with many branches of agriculture.

At present the mission of the MTS as the organizers of

olkhoz production, the bearers of technical progress, the arriers of the large collective farm idea has been basically ulfilled. At the same time the collective farms themselves ave grown up and been strengthened; they have become arge-scale concerns with a high degree of concentration of roduction. This may be seen from the following data:

	1932	1940	1949	1953	1957
There were per kolkhoz:					
peasant households (members)	71	81	80	220	244
sown area in ha.	434	492	453	1,407	1,695
cattle, number	42	85	100	298	374
including cows, number	13	24	23	93	138
pigs, number	15	35	38	145	256
sheep and goats, number	54	177	258	835	913
indivisible funds in thousand rubles	22	118	187	770	ab. 1,300
Money income in thousand rubles	22	88	111	547	1,247

We can see from this table that up to 1950 the collective arms were small, and because of that could not use machines efficiently. Concentration of machines in the MTS as not only justified, but even necessary. The situation has ow radically changed: the average collective farm has bout 1,700 ha of sown area, while in 1949 the average collective farm had less than 500 ha of sown area. While sown rea per collective farm increased (compared with 1949) 3.7 imes, its indivisible funds increased almost seven times nd money incomes increased more than eleven times. Money income per able-bodied working member of the collective farm increased 3.3 times in the country as a whole.

Rendering production help to the collective farms through he MTS, the state annually spent large sums on the maintenance of the MTS so that the state expenses, compared ith payments in kind obtained for MTS work, were very igh. Below are given data concerning the cost of the collective and state farm products and expenses of the state per entner of payments in kind received from the collective arms in 1956:

	cost of prod. per centner of product (in r.)		state expenses per centner of payment in kind (in rubles)
	collective	state	
grain	56	33	85
meat (on hoof)	842	808	848
milk	130	127	180
wool	2186	1848	3028

Thus state expenses per centner of payments in kind were onsiderably higher than the cost of production of the same roducts on the state farms (though the cost on the state arms still remains high). The main reason is the existence f two masters on the land of the collective farms — collective farms and MTS, which is detrimental to good production conditions. Moreover each master had to have its own anagement staff and this increased the expenditures of roduction.

The number of engineers, technicians, agronomists, zootechnical personnel, office workers and junior servicing ersonnel on the MTS reached 300,000 in 1956 and made 10% of the total average number of MTS workers (excluding veterinarians). The wages of these categories of workers made up 21% of the total wages of MTS workers. Moreover, 173,000 brigadiers of tractor brigades and their assistants and 114,000 timekeeper-servicemen worked in the MTS in 1956 — 9.7% of the total average number of MTS workers. The wages of this group constituted 10% of the total sum of MTS wages. Thus these two groups aggregated 19.7% of the total average annual number of MTS workers and their wages amounted to 31% or about one-third of the total wages paid by the MTS. Moreover the workers of the tractor brigades earned 1,137 million labor-days in 1956, of which 252 million labor-days were earned by brigadiers, their assistants and timekeeper-servicemen of the tractor-brigades.

Big expenses on the wages of the administration personnel, engineers, technicians, agronomists, zoo-technicians and other administrative and servicing personnel considerably increased the expenses of the MTS. It should be noted that beside the MTS personnel there were also managers, agronomists and zootechnical personnel of the collective farms.

The total number of the administrative-servicing personnel, specialists, brigadiers and subfarm managers on the collective farms exceeded 1,500,000 men in 1956 and they earned 11% of the total number of labor-days. In the total number of administrative-servicing personnel of the collective farms in 1956 314,000 were brigadiers of the field brigades. At the same time 173,000 brigadiers and assistant brigadiers of the tractor brigades were working in the MTS. Thus the existence of two apparatuses of administration functioning parallel to each other not only made agricultural products more expensive, but increased irresponsibility and indifference to work.

Lately in a number of regions complex tractor-field brigades, with the kolkhoz brigadier at their head, were organized. Such an organization of labor allows more productive use of tractors, combines, and other agricultural machines; idle time — because of untimely supply of tractors in the field with fuel, water, and seeds — has been cut down, the quality of agricultural work has been improved and the expenditures of production have been reduced. How great is the importance of putting an end to the existence of these two parallel managements and concentrating machines and management in the same hands, namely, in the collective farms, may be seen from the example of the Stavropol region's collective farms. In 1957 41 Stavropol MTS (out of the total of 101 MTS there) served only one collective farm; in 12 of them the managements of the collective farm and of the MTS were fused, that is, the chairman of the collective farm became at the same time the director of the MTS, the chief agronomist became at the same time the agronomist of the collective farm and so on. There were also formed united complex production brigades with a brigadier at their head. As a result of this fusion of the management and production apparatuses the economic indices of labor have been considerably improved, as may be seem from the data on the next page for three collective farms.

These data clearly show that as a result of the fusion of the MTS and collective farms the cost of tractor work and the state expenses per centner of payments in kind have been sharply reduced. This reduction in the cost of tractor work and of the state expenses per centner of payments in kind in the collective farms with a single management apparatus in 1957 was greater than for the whole region. For example, the cost of tractor work per ha for the whole region in 1957 was reduced by 23%, but on these three collective farms the per cent of reduction was from 29 to 36%. The state expenditures per centner of payments in kind for

	Lenin coll. farm		Rossia coll. farm		Kazminsk coll. farm	
	1956	1957	1956	1957	1956	1957
cost of one ha of tractor work (in rubles)	33.5	24.7	23.5	15.6	23.7	16.8
state expenses per centner of payments in kind (in r.)						
grain	34.7	28.6	25.6	21.1	26.0	22.2
meat	605	445	370	272	514	306
milk	160	87	85	52	105	59

the whole region was reduced in 1957 in respect to grain by 3%; in these three collective farms the reduction varied from 15 to 18%; the corresponding figures for meat were 31, and from 27 to 40; for milk 31 and from 39 to 43.

An improvement of the economic indices was ensured chiefly through the better use of machines and labor power under a single management. The annual work per tractor in terms of 15 HP tractors for the region as a whole remained the same in 1957 as in 1956, namely — 689 ha; but on these three collective farms it increased by 4% and amounted to 709 ha. The average daily tractor performance in terms of the 15 HP tractors for the region as a whole in 1957, as compared with 1956, was even reduced by 6% and amounted to 4.9 ha of "plowed land" (a theoretical unit); on the three collective farms it increased by 7% and amounted to 5.9 ha.

The volume of agricultural production on these farms in 1957 also greatly increased and this ensured the growth of procurement sales to the state. The money incomes of the collective farms and the allocation of the indivisible funds increased. The maintenance of the management apparatus of the MTS with some fall in the volume of work resulted in an increase of expenses for payments in kind. Thus, in 1956 throughout the country 116 MTS served less than 2,500 ha each and 1,383 MTS served an area less than 10,000 ha each. 30 MTS had about 20 tractors each (in terms of 15 HP tractors), 56 MTS had from 20 to 40 tractors each (in terms of 15 HP tractors). For a small MTS, expenditures per centner of payments in kind were several times higher than for an MTS with a larger volume of work. The organization of such MTS was, as a rule, caused by a desire to help those collective farms which could not be served by a neighboring MTS. Nevertheless their maintenance was too expensive for the state.

The concentration of machines in the MTS and the presence of two masters on the kolkhoz fields also brought about the underutilization of the tractor fleet. This can be observed especially clearly in the small MTS. For example, in 1956 the annual average work of a tractor (in terms of 15 HP tractors) in 250 MTS did not exceed 200 ha (in terms of plowed land), in 302 MTS — 250 ha, in 521 MTS not more than 300 ha. The average daily work of the tractors in 590 MTS did not exceed 2.5 ha, in 642 MTS it varied between 2.5 and 3 ha and in 1,809 MTS between 3.1 and 4 ha. In the final account this also brought about an increase of state expenses for payments in kind.

The results of the work of small MTS are considerably worse than large MTS judging by all basic indices, as may be seen from the table below relating to 1956.

This table shows that though the basic means per ha of plowed land in the small MTS were larger than in the large MTS, yet the amount of the work done per ha per permanent production worker in the small MTS was 2.2 times smaller than in the large ones, the average daily work per 15 HP tractor was two times smaller, the cost per ha of work in terms of plowed land was twice as high and expenses per centner of payments in kind almost four times as high.

In 1957 1,500,000 tractor drivers, brigadiers of tractor

	av. for all MTS	annual volume of MTS work in thousands of ha				
		up to 30	30 to 40	40 to 60	60 to 80	80 to 100	more than 100
basic means of the MTS per ha of plowed land on the collective farms served by them	313	473	416	351	315	297	264
amount of work done per permanent production worker in ha	369	209	293	310	354	386	450
daily work per 15 hp tractor in ha	4.7	2.7	3.3	4.0	4.8	5.1	5.4
cost of one ha of work in terms of plowed land, in rubles	31	54	43	36	32	29	26
MTS expenses per centner of grain received as payment in kind, in rubles	59	173	132	93	67	53	44

brigades and their assistants, combine operators and chauffeurs were occupied in the MTS, or about 200 men per MTS and 20 men per collective farm. However, the permanent workers of the MTS in the autumnal-winter period were not used fully, as a result of which in some months they worked no more than 10 to 15 days a month.

The main cause of this insufficient use of the machine operators is the unsatisfactory organization of labor and especially the subordination of the permanent workers of the MTS along two chains of command. On the one hand they were permanent staff members of the MTS, on the other, they were members of the collective farms. The director of the MTS was not responsible for the full use of these MTS workers and so did not try to organize their work in winter time. As a result of this their wages in winter time were sharply reduced, many of them moved out and the use of others deteriorated. In turn the collective farms, of which these permanent MTS workers were members, had no right to require them to work on the collective farms. Thus the permanent workers of the MTS had two masters; one of them had a right to use their labor the year round, including the autumnal-winter period, but was not particularly interested in it; the other was very much interested in putting them to work, but had no right to require them to do so.

The concentration of all labor resources in the collective farms will improve the use of the labor force and this, in turn, will ensure a considerable rise in labor productivity on the collective farms and will reveal new possibilities for lowering costs in agriculture. The existence of such possibilities may be seen from the following grouping of the collective farms according to the cost of one centner of product in 1956 (the data are given in rubles; the figures are the result of a sample):

Grouping of the collective farms

Product	Leading	Lagging
Grain	37	70
Potatoes	19	42
Sugar beets	11	20
Raw cotton	163	243
Milk	115	134
Increase in the weight of hogs	1,168	1,654

Different levels of costs in different groups of collective farms can be partially explained by the differences in soil and climatic conditions. But let us take, for example, the Ukrainian SSR as a whole and the Kharkov region which have approximately the same soil and climatic conditions and let us examine the variations of the cost per centner of products in two groups of collective farms (the data are in rubles):

	Collective farms	
	Leading	Lagging
The Ukrainian SSR:		
Grain	45	85
Potatoes	17	35
Sugar beets	11	19
Milk	108	132
Increase in weight of hogs	771	1,316
The Kharkov region:		
Grain	56	119
Potatoes	23	34
Sugar beets	11	14
Milk	117	124
Increase in the weight of hogs	813	1,228

This grouping shows that differences in costs are explained mainly by differences in labor productivity and expenditure of materials and monetary means per unit of product. The leading collective farms use considerably less labor per unit of product than the lagging ones. This may be seen from the following data on expenditures of man-days per centner of product in the leading and lagging collective farms of the Ukrainian SSR in 1956 (the data are expressed as percentages of the averages for all collective farms):

	Collective farms	
	Leading	Lagging
Grain	81	130
Potatoes	81	138
Sugar beets	81	129
Milk	80	114
Increase in the weight of the hogs	77	124

This table shows the existence of great variations in the expenditure of labor per centner of product on the collective farms. The leading collective farms spend for the production of one centner of grain 1.6 times less man-days than the lagging ones, of potatoes — 1.7 times, of sugar beets 1.6 times, of milk — 1.4 times, in increasing the weight of hogs 1.6 times — and this in spite of the fact that the amount of labor spent in the leading collective farms is still considerable. The extent of the possibilities of lowering the expenditure of labor per unit of product may be seen from a comparison with the expenditure of labor on the state farms:

Expenditure of man-days per centner of the product in 1956

	state farms	collective farms
Grain (Kazakhstan SSR)	1.2	0.4
Potatoes (Regions of the Central Black Earth Zone)	0.5	0.8
Raw cotton (Uzbek SSR)	4.6	7.1
Milk (Estonian SSR)	1.3	2.3
Increase in the weight of the hogs (Ukrainian SSR)	7.1	15.3

These data show that the average expenditure of labor in the collective farms per unit of product is considerably higher than the corresponding figures for the state farms. Yet the labor expenditures of the state farms also could be cut down considerably.

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The realization of the measures outlined by the party and the government for the further development of the kolkhoz regime and the reorganization of the MTS will bring into action tremendous possibilities for increasing labor productivity and lowering costs. Now the collective farms have at their disposal not only the land for permanent use, but also their own machines. This ensures the full unity of the main productive power of agriculture — labor power of the collective farms and the main tools of labor which formerly were concentrated in the MTS — a unity which is necessary for the further development of the productive forces in Soviet agriculture.

The reorganization of the MTS, just as the recent overhauling of the system of management in industry and construction, should ensure the maximal use of the advantages

of the socialist economic system and production reserves, and the continued development of the creative initiative and activity of the masses. After the victory of Lenin's policy of collectivization the present reorganization of the MTS is the greatest and the most significant event in the development of socialist agriculture. The success of the measures worked out by the party and the government for the development of the kolkhoz regime and the reorganization of the MTS will result in a new upsurge of agriculture and will be a big step toward the construction of communist society.

S. VYGODSKY (Continued From Page 17)

(18) G. D. H. Cole, "The Post-War Condition of Britain," p. XIX.
(19) Ibid. p. 91.
(20) Ibid. pp. 219, 241.
(21) Ibid. p. 41.
(22) Ibid. p. XIX.
(23) "Monthly Bulletin of Statistics," October, 1957, p. 20.
(24) See "Pravda," March 16, 1958.
(25) See Marx, "Capital," Vol. I, 1954, p. 525.
(26) See Marx, "Theory of Surplus Value," Part II, 1957, pp. 4-5.
(27) V. I. Lenin, "Works," Vol. I, p. 96.
(28) "The Economic Almanac," 1951-52, pp. 218-219; "Federal Reserve Bulletin," December, 1957, pp. 1399-1400.
(29) Marx, "Capital," Vol. I, p. 657.
(30) Victor Perlo, "The Empire of High Finance," 1957, p. 45.
(31) Victor Perlo, "The Empire of High Finance," p. 128.
(32) "The New Statesman and Nation," May 9, 1953, p. 537.
(33) Marx and Engels, "Works," Vol. XVI, Part II, p. 165
(34) K. Marx, "Theories of Surplus Value," Part II, p. 497.
(35) V. I. Lenin, "Works," Vol. 21, pp. 47-48.
(36) G. D. H. Cole, "Capitalism in the Modern World," p. 28.
(37) Ibid.
(38) Marx and Engels' Archive, Vol. IV, p. 29.
(39) Marx, "Theories of the Surplus Value," Part II, p. 532.
(40) Jerome Davis, "Capitalism and its Culture." State Publishing House, 1949, p. 15.
(41) V. I. Lenin, "Works," Vol. 33, p. 134.
(42) J. K. Galbraith, "American Capitalism," 1952, p. 103.
(43) See Marx, "Capital," Vol. I, p. 652.

S. STRUMILIN (Continued From Page 24)

And now it is necessary to take care that the road from A to B is covered in the shortest possible time.

FOOTNOTES

(1) For the data on the power capacities see "The National Economy of the USSR in 1956," a statistical yearbook, 1957, p. 163; also "Achievements of Soviet Power in Forty Years in Figures," a statistical handbook, 1957, p. 149.
(2) See "Planned Economy," No. 10, 1957, p. 50.
(3) See "National Economy of the USSR in 1956," p. 40.
(4) See "October," No. 11, 1957.
(5) V. I. Lenin, Works, Vol. 27, p. 226.
(6) Ibid., p. 227.
(7) Ibid., p. 189.
(8) See "Communist," No. 4, 1958, pp. 42-44.
(9) See "Productivity and Utilization of Labor on the Collective Farms in the Second Five-Year Plan," State Planning Publishing House, 1939, p. 10.
(10) The data are purely theoretical.
(11) The figures are purely theoretical.

E. Sokolova:

The Structure of the Fuel Balance

During the years of Soviet power the fuel industry in our country was extensively developed. The output of all types of fuel and the production of hydroelectric energy increased as of 1957, compared with 1913, 10.5 times, and compared with 1940 — 2.2 times (in terms of standard fuel units).

The increase in fuel production was accompanied by a change in its structure. The role and importance of each type of fuel is changing with the development of the productive forces of the country. The change in structure of fuel output in the USSR is expressed by the following data (in % of the total and in recomputation into conventional fuel units):

	1940	1950	1955	1960
Coal	59.2	65.4	63.6	55.6
Oil	18.5	17.0	21.0	25.2
Natural gas	1.6	2.2	2.3	8.9
Peat	5.6	4.6	4.3	3.7
Shale oil	0.3	0.5	0.7	0.6
Hydroelectric energy	1.3	2.2	2.4	2.8
Fire wood	13.5	8.1	5.7	3.2

During the Patriotic War and in the period of rehabilitation of the national economy that followed, just as during the pre-war years, the structure of fuel output in the USSR was changing in the direction of raising the proportion of coal. Coal was the basic type of fuel. The second place in the fuel balance belonged to oil. The production of natural gas was just beginning. It should be noted that the development of the natural gas industry before the Sixth Five-Year Plan was slow and its share in the total output of fuel was quite inadequate.

The proportion of peat in the total output of fuel is insignificant and is systematically declining, though its absolute output is increasing. This is explained by the seasonable character of peat extraction, its dependence on meteorological conditions, the proportionally high capital investment per ton of capacity in operation (calculated in conventional fuel units). At the same time, peat, in terms of cost of production per ton, if used locally, can stand the competition of local brown coal and coal brought over a considerable distance, but yields to natural gas. The peat industry will continue to develop as a local fuel base. In the long run the proportion of peat in the fuel balance will decline, for the output of oil and natural gas will develop at a more rapid tempo.

The share of the shale oil in the total output of fuel-energy resources is now 0.6%. In the long run it will remain approximately on the same level. Shale oil is a fuel with a high content of low caloricity ash. Its cost of production is considerably higher than other types of fuel. At present the shale oil is untilized for producing artificial liquid fuel. Thus, for instance, in 1955 some 47% of the total output of shale oil was used at shale oil refineries.

In connection with the construction of hydroelectric stations the proportion of the hydroelectric energy in the fuel and energy balance of the USSR increased from 1.3% in 1940 to 2.9% in 1957. The harnessing of Siberian rivers, putting into operation at full capacity the Irkutsk hydroelectric station and aggregates of the Novosibirsk hydroelectric station in 1958, the construction of the Bratsk, the Krasnoyarsk and several other hydroelectric stations will secure the further growth of hydroelectric energy production; but this will not considerably change its proportion in the limits of the general plan of development of our national economy. During the pre-war years and the post-war period the structure of the fuel-energy balance improved basically because of a reduction of the share of fire-wood, which is hard to transport, has low caloricity, and is not profitable for large-scale industry. The technical reconstruction of towns and cities is increasing the proportion of buildings with central heating, electricity and gas, which is forcing out fire-wood from every day use. Fire-wood remains a local fuel for petty consumers, living in regions rich in forests (Urals, Siberia) basically for communal every day needs, such as heating.

The principal defect of the fuel output structure during the pre-war period and the years that followed, and also one of the causes of our fuel difficulties, was the considerable share of low calory hard fuel (brown coal, peat, shale oil, fire-wood) and the inadequate share of high calory fuel (natural gas, oil). With such a fuel output structure the complete satisfaction of the growing needs of the national economy for fuel is bound up with great expenditures of social labor.

During the Fifth Five-Year Plan a change in the direction of development of the fuel balance structure began to appear. The share of the most effective types of fuel — oil and natural gas — in the total output of fuel began to increase. The 20th Congress of the CPSU pointed out the necessity of forced development of the oil and gas industry. This directive is being successfully realized. Thus, the share of oil and natural gas in the total output of fuel increased from 19.2% in 1950 to 23.3% in 1955 and 27.4% in 1957. By 1960 it will reach approximately 34 to 35%. Along with this the share of coal and other types of hard fuel correspondingly is decreasing.

It should be noted that in the US the share of coal in the total output of fuel (including the production of hydroelectric energy) decreased from 84.2% in 1913 to 33.2% in 1955, and the share of oil and natural gas increased during the same period from 11.6% to 62.1%. In the USSR the tempo of increase in the output of oil began to leave behind the tempo of increase in output of coal as of 1946. During the Fifth and Sixth Five-Year Plans the output of oil has been growing even more rapidly (see table next page). In the long-range plan of development of the national economy for 1959-1965 a very high tempo of development of oil output and natural gas is provided.

The high tempo of development of oil and gas led to the increase in the proportion of oil and gas in the total output of fuel.

The rapidly growing needs of the national economy for oil products for the development of aircraft construction, automobile and tractor construction, modern building methods and the introduction of motor-locomotives on railroads

demand a maximum increase in the output of oil. Modern furnaces and boilers need high quality fuel, generating high temperatures, and these are oil and natural gas. The production of these types of fuel needs maximum development, and this is quite possible thanks to the colossal natural resources of the USSR.

The Communist Party and the Soviet Government always pay great attention to the problems of oil industry development. Enormous material and monetary resources and cadres are being directed into this industry. The average annual volume of capital investment in the oil industry in relation to the average annual capital investment in the national economy as a whole, represented 4.6% during the war years, 7.2% during the Fourth Five-Year Plan — 8.8% in the Fifth — and 8.1% in the Sixth Five-Year Plan.

Tempo of increase in output of coal, oil and natural gas in the USSR (in percentage of previous year)

Years	Coal	Oil	Natural gas
1946	9.8	11.9	18.2
1947	11.7	19.7	23.1
1948	13.6	12.3	8.3
1949	13.1	14.4	3.8
1950	10.9	13.2	7.4
1951	7.9	11.6	8.6
1952	6.7	11.8	1.6
1953	6.5	11.6	7.8
1954	8.3	12.3	8.7
1955	12.7	19.4	20.0
1956	7.4	18.3	34.4
1957	7.8	17.0	53.7
1958 (plan)	5.8	14.0	58.0

During the pre-war Five-Year plans the development of oil output was retarded by the lag of the geological survey. The commercial quantities of oil which were revealed were inadequate for a rapid development of the oil industry. In the old regions (Baku, Grosny) the natural oil resources were being used up while the utilization of the newly discovered resources was being developed very slowly. The oil industry faced the task of mastering new regions of oil output and of surmounting the difficulties connected with this.

The large-scale geological survey and the improvement of technology led to the discovery during the Fifth Five-Year Plan of important natural oil reserves in the regions of the Volga and Urals, including those in the Bashkir ASSR and Tartar ASSR. During the pre-war years drilling in these regions was difficult mainly because the drilling equipment was unsuitable to the exceptionally hard rocks in these regions. This problem was solved through the introduction of turbo-drilling. The utilization of this method of drilling increased the speed of driving through boring wells and made it possible to work on hard rocks. The development of the turbo-drilling method is characterized by the data given in the table that follows (in percentage of the total amount of drilling according to the former Oil Ministry).

Owing to the introduction of the turbo-drilling method the speed of operational drilling of oil boring-wells per instrument per month in the oil industry of the USSR increased from 63 meters in 1928 to 940 meters in 1956, and for prospecting drilling — from 40 to 342 meters.

The lagging of the technique of drilling during the pre-war years hindered the development of the oil industry. The overcoming of this lag created conditions for accelerating the tempo of development of the oil industry and at the same time promoted greater achievements in the field of geological surveys. As the result, during the Fifth Five-Year Plan the commercial reserves of oil increased 2.5 times.

	1940	1950	1955
Operational drilling	3.3	27.5	86.3
Prospecting drilling	0.2	18.4	79.1

The artificial support of stratum-tension by pumping water into the stratum and the method of hydraulic severanc was the principal factor for technical progress in the oil industry. This meant the mastering of a new technology of operating oil-rich strata, which made it possible to increase sharply the amount of extracted oil. The American specialists declare that through the tension of the gas current some 20-40% of the oil could be extracted from the stratum, through the pressure of the dissolved gas — from 10 to 20%, and through the pressure of water up to 85% of the oil can be obtained from the stratum.

As the result of the utilization of new methods of extracti oil its structure in terms of the methods of operating boreholes has changed (according to the former Oil Ministry, in % of the total output):

	methods of extraction			
Years	pumping	compression	fountain	others
1940	38.4	37.2	23.3	1.1
1950	44.7	21.1	32.5	1.7
1955	34.0	6.5	58.3	1.2

As can be seen, the fountain method of oil extraction, in which the yield of the bore-holes is greatest, became the basic one. The average yield of the working bore-holes per month in 1955 was characterized by following data. At the "Kuibyshev oil fields" the output was: by pumping — 62 tons by fountain — 2,303 tons; at the "Azov oil fields:" by pumping — 62 tons, by compressing — 299 tons, by fountain — 83 tons. In 1958 the fountain method will account for 74% of the total output of oil.

Technical progress in the oil industry guarantees the growth of labor productivity, lowers the cost of oil extraction and intensifies the economic advantages of oil over coal. Thus, for instance, the output of oil per worker increased in the oil industry in 1957 compared with 1950 2.3 times, and the cost of extraction of one ton of oil was lowered during the same period by 35%.

Oil is a highly economical type of fuel. The cost of extraction of oil, according to data of 1957, was 3.5 times lower than of coal. But it should be noted that oil is a peculiar fuel. It is first of all fuel for motors, designed to serve the airplane, auto and tractor fleets, the work of construction equipment, motor locomotives and water transport. Only a part of the oil output is used as energy and technological fuel in the form of black oil. Only this kind of oil appears as a fuel interchangeable with coal.

The state plan for the development of the national economy for 1958 provides for an oil output of 111.6 million tons. The capital investment in the oil industry is considerably growing, and this makes it possible to fulfill the program of drilling, assuring the fulfillment of the plan of extracting oil and of prospecting, which is sufficient to provide for an increase of commercial oil and gas reserves of 23% above 1957.

The plan provides for the development of technical progress in the oil industry. It is contemplated to increase the

speed of drilling by using bits of high durability and more powerful turbo-drills, as well as new washing solutions. At the same time further automation of the processes of oil extraction and in the introduction of hydraulic methods for breaking the stratum are being provided for.

A high tempo of development of the gas industry in the USSR is dictated by the economic advantages of natural gas compared with other types of fuel. Natural gas is the most economical and convenient type of fuel. The cost of production of natural gas is almost 12 times lower than the cost of production of coal (evaluated in conventional fuel units; 1957 data). The capital investment per unit of planned productive capacity in the gas industry proportionally is three times lower than in the coal industry.

Natural gas has a high caloric content and is adaptable to any regime of work. The process of burning easily yields to automatic regulation. Natural gas finds its widest use as energetic and technological fuel; it does not contaminate the atmosphere, does not form ashes and slag; for burning no complicated equipment is needed. It does not need any store-room. All this lowers expenditures when natural gas is used. Besides, natural gas is a very valuable raw-material for the chemical industry.

In the Fifth Five Year-Plan the task was set to develop the extraction of gas from pure-gas deposits. It became possible to realize this only during the period of the Great Patriotic War. The operation of pure-gas deposits was begun in 1943 along the Volga River (Bougouruslan and Yelshan natural gas deposits); during the same period the Bougouruslan-Kuibyshev gas-pipeline was opened for operation. Up to that time natural gas was extracted in the USSR only together with oil. By 1945 the output of natural gas amounted to 3.3 billion cubic meters, in 1950 — 5.8 billion cubic meters, in 1955 — 9.0 billion cubic meters. The plan for 1958 provides for an output of natural gas up to 29.6 billion cm and for 1960 — 60 billion cm. In the next 15 years it is planned to develop output of natural gas up to 270 — 320 billion cubic meters.

Before the war the output of natural gases was retarded by the scant knowledge of geological reserves. The discovery of new large-scale deposits of gases made possible the maximum output development of this highly effective fuel. The 20th Congress of the CPSU pointed out the necessity of forced development of the gas industry during the Sixth Five-Year Plan. This decision is now successfully being realized. The output of natural gas in 1950 will increase 3.3 times compared with 1955.

The contemplated further development of the output of natural gas demands serious work in preparing consumers for its rational use.

Natural gas is a new type of fuel in our fuel balance, and branches of the national economy only are beginning to use it. That is why it is important to determine the rational direction for its utilization. In our opinion, the use of natural gas is particularly effective first as a raw-material for the chemical industry and for the production of carbon black and liquefied gases, secondly as a fuel for public utilities (gasification of towns, preparing food, heating water, heating living quarters), as well as a technological fuel for industrial enterprises, where the character of production demands the use of gas, and finally — as an energy-producing fuel for industry, including fuel for electric power stations of large industrial towns. But at present the chemical industry is not yet adequately prepared to use natural gas in large quantities as a raw material. The gasification of towns also is proceeding slowly. Therefore, in order to utilize the constantly growing output of natural gas, regional electric power stations are using it as fuel.

The principal consumers of gas now are the regional electric power stations, the oil industry and the public utilities. According to the 1957 plan 30.6% of the total output of gas was used by regional power stations, 22.1% by the oil and gas industry, 15.1% by public utilities, 7.3% in the building materials industry, and 0.7% by the chemical industry.

Such a structure for using gas cannot be considered as rational. The transition of our regional electric power station to natural gas is being forced excessively, and the proportion of gas use is too high. The electric power stations located in large industrial centers certainly, should switch to natural gas if they are far from the coal basins, but why should stations working on coal products, located in the Don coal basin, be transferred to natural gas? True, it is more advantageous for a given power station to work on gas than on coal products, but the interests of national economy demand that large stations work on coal products. Petty consumers certainly cannot rationally use low-grade fuel. The use of gas by public utilities and by the chemical industry is absolutely insufficient. In this respect we still are behind the US. In the US according to 1956 data the expenditure of natural gas for public utilities was 29.6% and for electric power stations — 12% of the total. The forced shifting of our regional power stations to natural gas must be considered as a measure that we were compelled to take. It is necessary widely to develop the work of preparing for the use of gas as a raw material for the chemical industry, as a technological fuel for industrial enterprises and for the gasification of towns.

The structure of the use of natural gas in the US is given in the table on the following page.

The main consumer of gas in the US is industry. More than 60% of the total is consumed by industry. The absolute amount of gas consumed by industry increased from 58.8 billion cubic meters in 1940 to 187 billion cubic meters in 1956. Among the industrial users the leading place is occupied by the oil industry.

In the oil industry of the US natural gas is used for its own needs in extracting and processing oil, for the production of carbon black and for the intensification of pressure in the bore-holes. Cement plants are large-scale users of gas. Aside from this, the products of the oil and gas industry have acquired great importance as raw material and energy-producing fuel in the chemical industry of the US. In spite of the considerable volume of production of synthetic rubber, plastics, solvents and chemical fiber, still the first place among the chemical products of oil belongs to synthetic ammonia, produced out of natural gas and the catalytic cracking of hydrogen. More than 80% of the ammonia used in the US comes from the rapidly developing production of synthetic ammonia.

In the US a large percentage of natural gas is used for public utilities, and its share in the total consumed is systematically growing.

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The decline of the share of coal in the total production of fuel in the USSR does not mean at all that the absolute output in the next years will diminish. The tempo of increase in coal output certainly will slow down in comparison with the output of the more economical types of fuel. But the need for coal in the natural economy still is great and will grow.

The growing demand of the national economy for metal requires a high tempo of development of ferrous metallurgy. In accordance with the directives of the party and the government in the long-range plan of development of the national economy for 1959 — 1965 a mighty growth of ferrous metallurgy will be provided. In this connection the demand

	1940		1950		1956	
	in billions of cubic meters	in % of the total	in billions of cubic meters	in % of the total	in billions of cubic meters	in % of the total
Industry	58.8	75.7	125.7	70.7	187.0	64.2
power stations	5.2	6.7	17.8	10.0	35.0	12.0
Public utilities	16.4	21.1	44.9	25.3	86.2	29.6
Other expenditures, including losses on transport and increase of supply in gas storage tanks	2.5	3.2	7.3	4.0	17.8	6.2
Total	77.7	100.0	177.9	100.0	291.0	100.0

of ferrous metallurgy for coking coal will increase sharply. Considering that at present a strained coking coal balance is being formed, it is especially important to intensify the efforts to increasing its output. The demand for coal will grow because of the development of industry in the eastern part of the country where coal is now the cheapest type of fuel. The demand for coal in the regions of Siberia and the Far East will increase during the Sixth Five-Year Plan by 75%.

In connection with the increase in the needs of the eastern regions of the country for coal, the long-range plan of development of the national economy in 1959-1965 should provide for preferential capital investment in the development of coal fields in these regions.

The use of coal by power stations is growing, and these stations are among the principal consumers of this fuel. In 1955 their share was 21% of the total consumption of coal. With the accelerated development of the chemical industry the use of coal as a raw material for the production of "capron" (fiber) "sylon," "nytron" and synthetic rubber will increase considerably.

The use of coal on an industrial scale in technological and chemical processes for generating power also will promote its increased consumption.

Comrade Khrushchev said in his speech at the Jubilee session of the USSR Supreme Soviet that in the next 15 years the output of coal must reach 650 — 750 billion tons (against 463 million ton in 1957). For 1958 the output of coal is planned at 489.3 million tons. The state plan for the development of the national economy for 1958 contemplates the extended use of the most progressive methods of coal production, in particular the open method. The achievements of machine-building have created a basis for the successful development of the open method of extracting coal, which has been used in recent years on a wider scale.

In 1940 the share of the coal produced by the open method was 3.8%; in 1950 — 10.4%; in 1955 — 16.6%; in 1958 — 19% (plan); in 1960 it is planned to produce 21.5% of the total output of coal by this method. The labor productivity at the coal "sections" is considerably higher than in underground extraction. The increase in output of coal per worker in the coal industry (from 30.6 in 1940 to 38.3 in 1956) is the result mostly of the introduction of the open method.

The cost of one ton of coal extracted by the open method, according to the data of 1955, was 3.5 times lower than for extraction in coal pits. The open method as the most economical, is being used more and more widely. In the US 23.5%, and in the Federal Republic of Germany 41% of the total output was extracted by this method. The long-range plan for 1959-1965 also provided for the further mechanization and automation of operations in the coal industry. It is particularly important to solve the problem of complex mechanization of the coal industry. For that purpose it is necessary first of all to pull up the sections lagging behind in the field of mechanization (the working of the basic horizontal excavations and piling of coal drifts). The 1958 plan provides for a considerable increase in the production of coal-pit equipment, the use of which will lift the level of mechanization of these works. A radical improvement of the organization of labor in the coal industry is an urgent task. Along with this it is important to pay serious attention to the improvement of qualitative indices of work in the coal industry, especially for lowering the cost of production and improving its quality. In 1957 the ash-content of coal amounted to 18.6% while in 1940 it was 15.2%. The cost of production in 1957 was 8.5% higher than in 1955.

The introduction of new methods of extraction of coal on a large-scale — hydro-mechanical and open — the development of underground gasification of coal, the solution of the problem of complex mechanization and automatization of the processes of coal extraction, the perfection of the organization of work — all this will promote the successful development of coal production and raise its economic effectiveness. One should also note that in the eastern regions of the country, having the richest coal reserves, this fuel still has economic advantages over oil and natural gas. But, in spite of the absolute increase in the output of coal, its share in the total output of fuel and energy resources will decrease in the long run from 60.8% in 1957 down to 32.2% in 1972.

The structure of coal use is changing. In 1955 metallurgy consumed 23.5% of the total, regional power stations — 21% and railroad, sea and river transport — 25%. Thus, these three consumed 69.5% of the total coal used in the country. In the structure of coal use the tendency is observed toward an increase of the share of metallurgy and electric power stations. With the transfer of transport to diesel fuel and electric traction its share in the use of coal is decreasing.

The structure of coal use in the US can be seen from the following table (in % of the total):

	1940	1946	1950	1954
Transport	19.7	22.0	13.3	4.8
Electric stations	11.3	13.9	19.4	31.6
Metallurgy	21.4	18.4	24.7	24.8
Public utilities and trade	20.5	20.3	19.2	14.6
Others	27.1	25.4	23.4	24.2

At present the structure of coal use in the US is changing in the direction of a decrease in the share of transport, public utilities and trade, and an increase in the share of electric power stations and metallurgy. With the growth of fer-

rous metallurgy the demand for coal is increasing. The development in the US of open coal extraction is lowering the cost of coal and makes the construction of electric power stations working on coal more advantageous than electric stations working on oil or natural gas, for these types of fuel are more expensive in the US.

The public utilities and trade enterprises in the US curtail their use of coal as they transfer to natural gas, because, for this category of consumers, this fuel is the most convenient and advantageous. Railroad transport is curtailing the use of coal as the result of the wide-spreading use of motor locomotives.

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Priority in the field of using atomic energy for peaceful purposes belongs to the Soviet Union. Considering the advantages of nuclear energy over other types of energy, the most developed capitalist countries — the US and England — also are working for the industrial utilization of atomic energy. England does not possess sufficient natural fuel resources needed for meeting the energy demands during the next 20 years. The solution of the problem of supplying enough fuel in that country is possible either by import or by the utilization of nuclear energy. The British economists consider it expedient to solve this problem through the use of nuclear energy. In connection with this it is planned to obtain about 40% of the electric energy in England by 1975 from atomic electric power stations. The American economists consider that in the perspective of the next 15-20 years nuclear energy will become one of the main sources of electric energy, and that the share of electric energy produced by atomic electric-power stations in 15 years will be higher than the share of hydroelectric energy in the total balance of electricity. (In 1955 the proportion of hydroelectric energy in the total production of electric energy in the US amounted to 18.6%).

Nuclear energy is the newest and the most progressive type of energy. One of its advantages over other types of fuel is that there is an enormous amount of energy in a small quantity of raw material. At the 20th Congress of the CPSU it was noted that the nuclear fission of one ton of Uranium 235 generates as much energy as the burning of two million tons of coal. The significance of this is particularly great considering the enormous growth in the USSR of the need for fuel during the next 15-20 years. According to preliminary data cited in the report of N. S. Khrushchev at the jubilee session of the USSR Supreme Soviet in 15 years the production of fuel and energy resources will increase three times. The structure of the output of power-producing fuel resources in the USSR during that period will sharply change in the direction of increasing the proportion of more economical types of fuel (oil and gas). In 15 years the following fuel output structure will be reached (in % of the total, evaluated in conventional fuel units):

	1957	1972
Coal	60.8	32.2
Oil	23.4	34.4
Natural gas	4.0	23.3
Peat	3.8	2.4
Hydroelectric energy	2.9	2.6
Atomic energy	—	3.2
Fire wood	4.4	1.3
Shale oil	0.7	0.6

This fuel-energy balance structure, reflecting a high technical level of development of the national economy, is more rational than the present one. The cost of production of one ton of conventional fuel in the USSR will decline by 36% thanks to the rationalization of the fuel balance. Raising the share of oil and natural gas will result in approximately 50 billion rubles savings by 1972.

One has to note that even with a considerable lowering (by almost half) of the share of coal (in the total production of fuel) its output will reach colossal dimensions. The extraction of coal, its loading and unloading, as well as its transportation over long distances (average length of haulage of one ton of coal and coke in 1956 was 718 kilometers), will demand enormous expenditures of social labor. The growing scale of fuel consumption urgently demands a resolute transition to the more effective types of fuel and in the long run — to atomic energy.

At present the cost of electric energy and the proportional share of capital investments in the thermal and hydroelectric power station, now in operation, certainly, are lower than for atomic stations, planned for construction. But technical progress in building atomic stations can make economically advantageous the construction of atomic electric stations on a larger scale.

In the long-range plan of development of the national economy efforts should be provided for which will promote the introduction of atomic energy in electric power stations and in water and railroad transport, on a large scale. This is important in order to eliminate fuel difficulties.

Thus, in perspective the structure of the fuel-energy balance in the national economy of the USSR must improve in the direction of raising the proportion of oil, natural gas and atomic energy, while reducing the share of coal, firewood, shale and peat. The basic advantages of the socialist economy and the successes in the field of technical progress will make it possible within the long-range plan of development of our economy to catch up with the US in the level of fuel production, and then in the per capita production of fuel.

A. D. Kuznetsov:

Certain Problems of Utilization of Labor Resources

The availability of labor resources and their utilization in the production of material wealth is one of the most important factors determining the economic might of a country. The progressive character of socialist production-relations is revealed in particular in the fact that they create conditions for the most complete and rational utilization of labor resources.

Capitalist society, especially in the stage of imperialism, is not capable of utilizing the available labor resources. This is proved by the existence of a constant army of unemployed. The proportion of productive members is systematically decreasing in capitalist countries and the number of people occupied in the non-productive sphere is growing. Thus, in the US from the beginning of 20th century, i.e. from the emergence of imperialism, the productive part of the population grew half as rapidly as the entire production, and during the 1930-1940 period — as high as 3.5 times slower. The proportion of those who are occupied in the sphere of production is systematically declining in the US as can be seen from the data in table (A) below.(1)

In France during 1930-1950 the number of workers occupied in the sphere of material production declined not only relatively, but also in absolute figures.(2) In other capitalist countries the productive population is also decreasing in comparison with the entire population.

Bourgeois economists try to deny the operation of the capitalist law of population discovered by Marx. They refer to the relatively high general employment of the able-bodied population. The percentage of those gainfully occupied, in the total population for instance, was as follows: in France and Japan at the end of the 19th and early 20th centuries — 47-50%. In the fifties of the 20th century in France and Japan still it was 44-45%, and in the US — 39% (in 1950).(3)

One has to keep in mind that such indices of employment in these countries, in spite of the sharp decline of the specific weight of those occupied in industry, is explained as follows: firstly, by the fact that those who do not work an entire week are included in the number of occupied; and secondly, by the fact that the number of people employed in the government, trade, personal services and serving in the army and police has increased. In the US in 1939 almost 900,000 people were occupied in the state apparatus, and in 1955 — more than two million people. The aggravation of the realization problem causes a constant increase in the number of those who are working in commerce. Before the First World War 10% of the gainfully employed population was occupied in commerce in the US; during the years of crisis (1929-1932) — 13%; in 1955 there was already 20%. A great number of people are also occupied in advertising.

With the general increase in the number of people occupied in the unproductive sphere, the number employed in the sphere of education and public health in the capitalist countries is declining in relation to the total. For instance, in the US, according to censuses, in 1930 there were 69 teachers per 10,000 population, while in 1950 — only 60.

In a socialist society, providing for full employment of the entire able-bodied population and the best distribution and utilization of the available labor resources is a reality and an objective necessity. Under socialism unemployment is abolished and the premises are created for raising the pro-

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Years	occupied in production		Years	occupied in production	
	thousands of people	% of the total gainfully employed		thousands of people	% of the total gainfully employed
1870	9,840	75	1920	26,670	61
1880	12,821	74	1930	26,251	55
1890	16,094	69	1940	26,877	54
1900	18,516	65	1950	28,954	49.5
1910	23,456	63			

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	In Russia 1914-1915	In the USSR		
		1927-1928	1940-1941	1955-1956
Per 10,000 population there were: students in secondary special schools and higher institutions of learning	11.4	24	93	190
in above, students of institutions of higher learning, teachers, and scientific workers	8	11	42	93
public health workers(6)	15	23(5)	68	90
physicians	1.8	27 4.6	78.5 8.0	131 16.7

ortion of workers in production in the total number of gainfully employed people. According to the data of the Central tatistical Administration of the USSR, in the branches producing material wealth in its natural form, i.e. in industry, onstruction, agriculture and forestry in our country in 956 74% of the total gainfully employed population were occupied. If the entire productive sphere is considered, this ercentage is increased to 85%. And, in contrast to the capialist countries, under conditions of socialism the number f workers in public health, education, adult students and cientific workers is increasing relatively and absolutely. his is seen from the data in table (B) on the preceding age.(4)

The realization of a cultural revolution and the training on large scale of cadres of specialists in the USSR could not ut bring a change in the proportion of workers occupied in ranches producing material wealth and in other branches f socially useful activity: the number of workers in the irst group during 1932-1940 relatively decreased and in the econd group increased.(7)

The number of workers occupied in the production of maerial wealth increased during the post-war period in absoute and relative figures. Thus the average number of workrs increased by 1955, compared with 1940, by 55%. The umber of people working in industry, construction in the tate farms and MTS increased by 78%, and in other ranches by 33.5%.

The development of social production in order to meet the rowing material and cultural requirements of the toiling eople demands the fullest utilization of the physical and mental capacities of the nation and a planned distribution f workers in accordance with various spheres of activity nd economic regions. The socialist organization of producion is incompatible with a spontaneous fluctuation of manower and the enormous losses in working time connected vith it.

A planned distribution of labor resources in branches and egions, the organized recruitment of labor, the proper seection and placing of cadres secure a much better utilizaion of the available labor resources than under capitalism.

The most important lever for the planned regulation of abor turn-over under socialism is the proper distribution f means of subsistence, i.e. of the fund of personal consumption. This distribution is carried out by the socialist tate as the organizer of production and the owner of the means and products of production.

Raising the mass of labor occupied in production with a given number of gainfully employed and a given length of he working day can be achieved by a change in the proporion of workers in the production and nonproduction spheres. The change in this proportion is very important for the inrease in the output of manufactured products.

But it is known that an increase in the number of workers n material production is an extensive increase in the mount of productive labor in society, and not a growth of ts productivity. The high tempo of growth of labor producivity on the basis of technical progress, better work organiation, better utilization of natural conditions, perfection of he practice of planning and forms of economic management reate the conditions for a relative shortening of working ime, reducing the length of the working week, increasing he time for vacations, etc.

The problems of raising labor productivity and of inreasing the expenditures of labor in the productive sphere re interrelated. As the result of the transfer of workers rom the nonproductive to the productive sphere society reeives a new productive force with the same volume consumption fund. Workers transferred from the nonproductive sphere into industry or agriculture are transformed from consumers of the surplus product into its producers. This is very advantageous for the state and, consequently for all members of socialist society. Economy in the wage fund attained as a result of a decrease in the number of nonproductive workers can be used for increasing the wage fund of the productive workers, who are producing not only products for themselves, but also a surplus product. This is why, in our opinion, it is necessary to provide in the long-range plans of economic development for measures intensifying the personal material interest of workers to transfer from the sphere of management to the sphere of material production. It would also be useful to study the influence of the distribution of the state wage fund and changes in its structure on the course of socialist reproduction.

The economic might of a country, other conditions being equal, to a considerable extent depends on the structure of the national economy and the proportions in which the productive workers are distributed among different branches. Thus, the relative growth of the industrial population is a progressive process. As a rule, this is accompanied by a decrease in the agricultural population. This process occurs in most countries with the development of the productive forces.

The proportion of industrial population has been growing in the USSR more rapidly than in capitalist countries. Thus in the US in 80 years (1870-1950) the specific weight of workers in industry (including all the employees and technical workers in industry) increased less than twice. In France it increased for the last half century only insignificantly. At the same time in the USSR for a shorter period of time (1928-1955) the specific weight of industrial-productive personnel (excluding the employees and engineering-technical workers of the industrial ministries, departments and administrations) rose 3.5 times.

The decrease of the share of workers occupied in agriculture in the total number of gainfully employed is explained by a number of causes. First of all, one has to note that the development of industry creates conditions for increasing labor productivity in agriculture and freeing labor from this branch. Then many processes of work which used to be performed in agriculture are now performed in industry. Finally, the rapid growth of the chemical industry allows us to replace products of agriculture, which in the past were used for technical purposes, by products of industry itself.

Agriculture, thanks to the development of industry, is becoming less demanding of labor and more productive. Agricultural labor productivity in industrially developed countries is considerably higher than in agrarian countries. For instance, it was considered that in 1950 600 million people were occupied in agriculture throughout the world, i.e. about one-fourth of the world population. In the countries of Asia (outside of the USSR) and Africa about 70% of all working people were occupied in agriculture. In the countries of North-Western and Central Europe — about 20%, in North America — about 13%. During the period of 1870-1900 in the US out of every thousand people, 175 were working in agriculture; and in 1950 — only 48. If we do not take into consideration US foreign trade, then we see that in the past one agricultural worker produced products for six people, and at present for 20 people. These data reflect the great growth of labor productivity in the field of agriculture in industrially developed countries.

Large-scale, highly mechanized socialist agriculture is quite capable of raising labor productivity. The advantages of the socialist system of economy make it possible not only to achieve in very short time the level of agricultural labor productivity in the US but even to surpass it. But to solve

this problem great efforts are required.

As a result of measures taken in our country in recent years, agricultural production made rapid advances and now is on a mighty upswing. Our country, we know, is successfully solving the task of overtaking the US in the near future in the production of meat, milk, and butter per capita of population.

The continued development of collective farming and the reorganization of the MTS, the progress of relations between state industry and the collective-cooperative economic sector in the direction, outlined in the resolutions of the February plenum of the CC of the CPSU and of the first session of the USSR Supreme Soviet at its fifth convocation, are creating the conditions for a still mightier upswing of agriculture.

The growth of labor productivity in agriculture and the increase in the annual average number of man-days per occupied person serve as premises for the further freeing of agricultural workers for industry; though, under present conditions, the influx of labor into industry from agriculture will not occur as intensively as it did during the period 1930-1950. But one should bear in mind that in Ukrainian agriculture (especially in its western regions), Byelorussia, Moldavia and a number of other regions of European USSR the number of workers still is relatively large.

Our industry possess enormous possibilities for expanding its production, primarily through the further growth of labor productivity in industry itself, on the basis of constant technical progress and the improvement of production and labor organization. As the experience of labor organization at progressive enterprises and construction sites indicates, considerable labor reserves necessary for the further expansion of industrial production, exist in industry itself. At many enterprises the number of employees among the industrial-productive personnel still is comparatively large.

The reconstruction of industrial and construction management has created great possibilities for reducing the apparatus of management at the enterprises, as well as at the organs coordinating their work. The elimination of multistage management, the simplification of its structure, economy in bookkeeping-accounting and controlling apparatus, the elimination of parallelism in the field of material-technical supply, the enlargement of small production sectors and factory-management organs, carried on in the process of improving the organizational forms of industrial and construction management, cannot but result in raising the proportion of workers and technical personnel in the total number of those occupied in industry and construction. That is why the "forecasts" of the Director of the Oxford Research Institute, Colin Clark, are completely baseless when he states that in the USSR, allegedly "a rapid slowing down of the tempo of economic growth will occur," for "the transfer of large number of people from agriculture to industry cannot continue."(8)

The proportion of production workers and technical personnel in USSR industry is steadily increasing. The structure of industrial-productive personnel in the USSR, according to the data of the Central Statistical Administration, changed in the following manner (in % of the total number of industrial workers and employees):(9)

	1932	1937	1949	1950	1955
workers	75	78	76	80	82
employees	9	6	7	5	4
engineers, technicians	5	7	8.5	8.5	9
others (apprentices, guards etc.)	11	9	8.5	6.5	5

A socialist society possesses the ability to increase the number of workers directly producing material wealth at the expense of relatively reducing the total number of office workers. Engineering-technical cadres, however, are not reduced. Technical progress is accompanied by a relative and absolute increase in their number. The availability of engineering-technical cadres, their qualifications, degree and character of utilization are serious factors for strengthening the economic might of the country.

It is widely known that the USSR is ahead of all the most developed capitalist countries in the scale of training engineers. At present the economy of our country possesses enormous resources of scientific and technical forces. But they are not always utilized rationally. Bringing them closer to production is an important condition for their more effective use.

Large funds are appropriated in the USSR for scientific-research work. During the years of Soviet power a large net-work of various scientific-research institutions has been created. The work of Soviet scholars, designers and engineers has received world-wide recognition. The creation of powerful airplanes such as the "TU-104" and the "TU-114," the world's largest synchrophasotron, the intercontinental ballistic rocket, the launching of the first artificial satellites, the building of the first atomic electric station, the designing of thousands of new types of highly productive machines and automatic lines — all this speaks of a high level of development of scientific, technical and engineering thought in the Soviet Union. Still many technical problems are not yet solved, and some of the worked-out problems wait too long to be introduced into production, as the result of the still existing disconnection and dispersion of the scientific-technical forces and their isolation from production.

Bringing the scientific-technical forces closer to production, certainly, is difficult. In our opinion, the methods of economic stimulation, checked in practice, have to play a basic role in solving this problem. For instance, it would be useful to establish a somewhat higher remuneration for workers of the scientific institutions on the periphery, those newly organized or moved from big cities closer to production, in comparision with the remuneration of the workers of the central institutions, who remain in big cities partly by refusal to change their residence, etc. There is no doubt that bringing the scientific-technical forces closer to production would significantly improve the effectiveness of scientific work, accelerate the introduction into industry of scientific discoveries and inventions and would create conditions for the better distribution of institutions training specialists for the national economy.

While bringing scientific-research work closer to production it is necessary to strengthen by every means the central scientific-research institutions, important for the entire Union.

Enlarging the central scientific-research institutions would strengthen their experimental-production base and would reduce the total expenditures on scientific-research institutions even if the remuneration of the workers of the enlarged institutions were raised.

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In recent years all industrial countries are experiencing a process of unloading large cities and towns of industrial enterprises. Up to 1940 in the US, in the large towns with a population over 100,000, almost 50% of all industrial enterprises were concentrated; in 1955 their number decreased to 30%.(10) The unloading of large cities in the US continues even more intensively. A similar process is observed in France. Thus, for instance, 57 enterprises trans-

erred from Paris and its suburbs during 1950-1954, and during 1955-1956 another 150 enterprises.(11) For the unoading of large cities in France a special organ was formed – the Board of Directors for Planning and Organizing Public Services in the Territories. The process of transferring ndustry from large cities is supplemented by a spontaneous dispersion of the population beyond the limits of large cities.

The concentration of industry inside and around large cities in the USSR led to a rapid growth of urban population n general, and, in particular, to a sharp increase of population in large cities. At present almost one-half of the entire urban population of our country resides in cities with 100,000 and more people; 30% of the urban population live in cities with 300,000 people or more. According to data, by early 1956 almost one-fourth of the urban population was concentrated in the 22 largest cities of 500,000 or more people. The growth of the capital cities of the Union republics is very intensive. Thus the population of Kiev increased during 1926-1956 by 478,000 persons; of Tashkent by 454,000; of Tbilisi — by 341,000; of Ashkhabad — from 51,600 to 142,000; of Stalinabad — more than 34 times. The proportion of the population living in large cities continues to increase.

The continuation this tendency can make more difficult most rational utilization of labor resources available in the country. In our opinion, it is imperative to overcome this tendency and to stimulate economically the transfer of labor, especially of young people, from large cities to new industrial towns and labor communities. Unloading large cities will also permit us to solve more rapidly the housing problem, to reduce transportation expenses inside the cities and in the country as a whole, and will create more favorable conditions for the normal growth of population, which shows a tendency to decline with the concentration of people in large cities.

In order to bring labor resources closer to production and to overcome the tendency towards the overcrowding of large cities, in our opinion, it would be beneficial to carry out a proper differentiation of rent and abandon the existing "equalization" between the large, well-built modern cities and the workers' settlements.

The most effective means for unloading large cities is the systematic improvement in supplying the small-size towns with food-stuffs and industrial products, raising the tempo of construction of cultural institutions and public utilities, and especially of housing in new settlements.

The regulation of the distribution of labor resources among the economic-administrative regions is a very important problem. It is known that in the eastern regions of the USSR, owing to favorable natural conditions, a higher level of labor productivity and lower expenditures on the production of the principal products of industry prevail. The perspectives of development of the productive forces of the eastern regions in the next five-year plans on the basis of the newly found ores and coal deposits, very rich resources of energy, colossal reserves of timber, building materials and large tracts of arable land, demand a considerable transfer of labor from the western part of the country. The agriculture of the eastern regions could not satisfy the demands of the rapidly growing industry because in Siberian agriculture the load per able-bodied person is 3 to 5 times heavier than in the European part of the USSR. In Kazakhstan the amount of arable land per farmer was more than 24.7 hectares by 1957, i.e. 19 times more than in Moldavia, 14 times more than in the Ukraine and approximately 11 times more than in the central regions of the RSFSR.

The shortage of labor in the East, in particular in agriculture, and of specialists in construction, energetics, cultural and other services (physicians, teachers, etc.) is making difficult the economic mastering of new natural resources and the better utilization of favorable natural conditions of production in the eastern regions.

When carrying on nation-wide measures for raising the workers' material and cultural level, in our opinion more attention should be paid to those economic regions (and branches of labor) where the utilization of labor resources, and in particular, of specialists with higher and secondary education and of scholars produces the greatest results from the economic standpoint.

FOOTNOTES

(1) "International Labor Review," Vol. LXXIII, No. 5, 1956, p. 508. Here there are included all those occupied in industry, construction, fishing, agriculture, forestry. Not included are those in transport, communications and trade. As is well known, bourgeois statistics do not include people occupied in these branches in the sphere of services.

(2) According to "The Economic Almanac," 1956, p. 1; "Statistical Yearbook," 1955, p. 29; "International Labour Review," Vol. LXXIII, No. 5, 1956, p. 508.

(3) "International Labour Review," Vol. LXXIII, No. 2, 1956, pp. 152-174.

(4) According to the data of the statistical collections "National Economy of the USSR," 1956, pp. 17, 243, 244 and "Cultural Construction in the USSR," 1956, pp. 6, 7, 81, 248.

(5) Teachers only.

(6) Data for relative numbers of workers in public health and physicians given according to 1913, 1928, 1940 and 1955.

(7) This grouping we made conditionally only for comparison with the data of foreign countries.

(8) "The New Republic," 4/29, 2957, p. 12.

(9) See "Industry of the USSR," Statistical collection, 1957, p. 23.

(10) "Harvard Business Review," March-April, 1955, p. 33.

(11) "L'Usine Nouvelle," October, December 1956, February, 1957.

*Gunther Kolmey:**

Special Features of the Development of Industry and Foreign Economic Ties of the German Democratic Republic

With the development of the productive forces of society the tendency for extending and deepening the international division of labor is increasingly revealed. A planned, proportional social division of labor, not only on national, but also an international scale, is possible only under socialism. In the world capitalist system with its competition, social exploitation and national contradictions, the development of the international division of labor is characterized by deformity and disproportion, as long as it is hindered by capitalist production relations.

Socialism finds the capitalist international division of labor as an historical reality, contradicting its essence. Consequently, in the process of forming a socialist international division of labor it is necessary at the same time to overcome the old, capitalist division of labor and create a new, socialist international division of labor, to secure a rational, thorough utilization of all resources of all socialist countries in the interests not of separate countries, but of all the countries of the socialist system. Forming a rational international division of labor in the world socialist system is realized firstly, through a planned industrialization of the national economies of the world socialist system, and secondly, through coordination of the economic development of socialist nations. The task is to see that every socialist country eventually becomes industrialized with a high level of development of technique in all economic branches. This necessitates corrdinating the development of the national economies of the socialist countries through a coordination of their economic plans, the development of specialization and cooperation in production, foreign trade, etc.

The role of the German Democratic Republic in the world socialist economic system is characterized first of all by the fact that it is an industrial country with a highly developed division of labor. The Republic possesses large-scale, modern industry, a strong technical base, highly qualified workers, engineers and technicians. But as a result of the Second World War, and especially of the deleterious policy of the imperialist circles of the West serious disproportions have arisen.

Before the Second World War Germany covered the road of capitalist industrial development in a century. A complex division of labor was formed in the entire nation. On the other hand, Germany occupied a definite place in the world capitalist division of labor. As a result of the split of the country this division of labor on a national and international scale was destroyed. The German Democratic Republic retained a well developed manufacturing industry but with an inadequate energy, coal and metallurgical base. Western Germany retained favorable relations between the fuel-energy and metallurgical base on the one hand, and the manufacturing industry, on the other (it became even more favorable after the annexation in 1956 of the Saar).

* German Democratic Republic

It is clear that these basic differences in the material bases of production in the two German states demanded from the working people of the German Democratic Republic considerable efforts in order to ensure economic progress and proportional development. Building socialism was and is being realized in the Republic not in isolation, but with the help of other socialist states, primarily with the all-sided assistance of the Soviet Union. Given the existing world socialist system it became possible to coordinate the economic development of the GDR with the development of other economies of the world socialist system and thereby ensure the proportional economic development of the German Democratic Republic. Our policy is to develop the GDR as a component part of the world socialist economic system.

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Let us consider first of all the most important productive force of the GDR — its working class.

The population of the Republic in 1956 was 17.7 million people(1) (in the Federal Republic of Germany — 52.8 million people(2) or 74.9% of the total population of Germany).

Of 8.2 million people occupied in the national economy of the GDR at the end of 1956, 6.5 million, i.e. 79%, were industrial and office workers. Of these 4.8 million were occupied in industry, handicraft production, transport and trade. In the former unified Germany the proportion of industrial and office workers in the total number of gainfully employed population was 70% (1937). In the Federal Republic of Germany it is approximately 71%.

Proportion of workers in various industries in the GDR (end of 1956, in %)

	national economy as a whole	socialist sector	private sector
industry	41.8	46.1	29.4
construction	6.8	4.9	12.7
handicraft (excluding construction)	5.2	—	21.9
transport	6.7	8.5	1.3
agriculture and forestry	7.7	6.9	10.5
commerce	12.4	13.1	10.7
other branches	19.4	20.5	13.5
Total	100.0	100.0	100.0

By the end of 1956 the socialist sector of the German Democratic Republic engaged 5.2 million people or 63.1% of the entire population occupied in the economy of the Republic, and the socialist sector produced 74.3% of the total social product.

The working class is the leading class in our society. The German Democratic Republic also has considerable cadres of scientists, engineers and technicians who represent an important productive force formed during the decades of industrial development of the country. This develop-

ment has reached a high stage and is capable of growing further.

The industrial potential of the GDR is significant. While the proportion of gross product in industry and agriculture in all Germany before the Second World War was approximately 75:25, in the German Democratic Republic it is 81:19.

The three largest branches of industrial production of our Republic are: machine building and the chemical and textile industries. In 1956 they represented 36% of the total gross production of our industry.

During the First Five-Year Plan (1951-1955) GDR industrial production increased approximately 90%. Industry also developed successfully in subsequent years.

Growth of production in various branches of industry in the GDR in 1957 (1950 — 100)

Basic materials industry (3)	206.8
production of electric energy	153.1
mining industry	161.7
metallurgic industry	281.7
chemical industry	223.8
Metal working industry	252.1
machine building industry	239.0
electro-technical industry	311.8
precision instruments and optics	221.5
Light industry	184.5
textile industry	196.9
Food industry	243.9

Such a rapid growth of production in the GDR is the result of strengthening the people's democratic republic and the wide development of production initiative among the workers. These successes would not be possible without the enormous material help and assistance of the Soviet people, without the fraternal cooperation of the socialist countries.

As it was indicated above, some structural disproportions were and still are partially characteristic of the German Democratic Republic. They arose as the result of the war and the split of Germany. First of all the energy, raw material and metallurgical base of the GDR is too narrow. There is a shortage of natural energy resources (coal, oil, natural gas, hydro-energy), iron-ore, certain non-ferrous metals, wood and important types of agricultural raw materials, for instance, cotton and wool.

If we consider the territories of the two now-existing German states within boundaries of 1957 (FRG including the Saar region), then in 1936 for the territory of the GDR in its present boundaries the share of the total output for Germany as a whole was: coal — 2.3%, iron-ore — 5.1% and oil — 0.02%. The main coal region in Germany was and is the Ruhr district: in 1936 it produced 82.3% of the total coal output in Germany. The output of iron ore on the territory of the present Federal Republic of Germany in 1936 was 76.8% of the total for Germany as a whole.

In 1936 industry within the territory of the present GDR produced only 15% of the total all-German production of ferrous and non-ferrous metals (and a still lower percent of high quality steel), only 15% of metal articles and only 9% of steel and iron construction.(4)

The assets of the German Democratic Republic in the raw materials balance are first of all brown coal (the GDR is the world's largest producer of brown coal) and potassium salts. In 1936 industry on the territory of the Republic in its present boundaries produced 61.5% of the all-German output of brown coal, 66% of coal-briquettes and 57% of the rock-salt and potassium salts.

On the territory of the GDR in its present boundaries in 1936 92.8% of the total output of copper-ore, 31.5% of the non-ferrous metals, 40.1% of the liquid fuel, 32.9% of the mineral fertilizers, 35.9% of the plastics, and 33.8% of the electric energy were produced.(5)

As we noted above, the workers of the German Democratic Republic made special efforts in order to alleviate the disproportions in industrial production which were the results of war and the division of Germany. But these disproportions are still not eliminated.

At present the volume of production of electric energy, pig-iron, steel and various products of basic chemistry in the GDR is considerably higher than in 1936 (on comparable territory). Here it should be taken into consideration that it was necessary to liquidate the losses inflicted on production by war, i.e. it was necessary to start its development from a level much lower than the level of 1936. The insignificant increase in the output of copper-ore (by 20% compared with 1936) and the reduction of the coal output (75% of the 1936 level) are explained by the exhaustion of the rich strata of deposits.

In 1955 GDR production of electric energy amounted to 1,600 kilowatt hours per capita, and in the FRG (7) — 1,300 kwh; coal respectively — 148.6 and 2,504.7 kilograms; brown coal 11,179.9 and 1,731.3 kilograms; iron-ore — 92.7 and 300.5 klg; potassium salts — 86.5 and 38.7 klg; pig-iron — 84.5 and 315.8 klg; steel ingots — 139.7 and 397.7 klg; sulphuric acid — 26.9 and 35.7 klg; nitric fertilizers — 16.4 and 14.6 klg; cement — 165.6 and 359.6 klg.

From the cited data on the volume of production of various types of industrial products per capita in the GDR and in the FRG it is seen that in the German Democratic Republic the output of brown coal and potassium salts, as well as the production of nitric fertilizers and electric-energy was higher than in Western Germany. But the present production of electric energy in the GDR still is not adequate to meet the needs of industry and the requirements of the population. That is why one of the immediate tasks is the increase in the next few years of the production of electric energy in the Republic.

The comparison of the volume of production of several branches of the manufacturing industry of the GDR and the FRG is considerably more favorable for the German Democratic Republic than the comparison of the volumes of production of basic materials. In 1936 on the territory of our Republic in its present boundaries, the following were produced: 31.1% of all German production of machines (8) (of this — 37.9% of the machine-tools (9)); 54.3% of the textile machinery; 25.4% of the electro-technical industry output; 33.1% of precision instrument and optics output; 38.1% of the products of the glass and ceramics industry; 44.9% of the sewing industry output.

At the same time, if we take into consideration the extremely low proportion of the output of coal and iron-ore on the present territory of the GDR within all-German output as well as of the production of ferrous metals, the disproportion between the most important basic materials' production and the manufacturing industry, which arose in the GDR as the result of breaking Germany into two states becomes clear.

The analysis of the comparable indices of industrial production in the GDR and FRG testifies to the fact that the German Democratic Republic has the advantage over the Federal Republic of Germany in the amount of per capita production of some types of products of the manufacturing industry. But the volume of production (or the volume of consumption) per capita not only of the most important basic materials, but also of many manufactured industrial

Proportion of GDR and FRG(6) in the all-German production of basic materials and electric energy in 1955

	GDR				FRG	
	1936	1955			1955	
	thousands of tons	thousands of tons	1936 = 100	% of all-German production	thousands of tons	% of all-German production
Electric energy (in millions of kwh)	14,000	28,695	205.0	29.5	68,521	70.5
coal	3,523	2,667	75.7	2.0	130,728	98.0
brown coal	101,056	200,612	198.5	68.9	90,357	31.1
oil	—	—	—	—	3,147	—
iron ore	1,406	1,664	409.7	9.5	15,684	90.5
copper ore	1,118	1,333	119.2	—	—	—
potasium salt	953	1,552	162.9	43.4	2,020	56.6
pig-iron	202	1,517	751.5	8.4	16,482	91.6
steel (ingots)	1,199	2,508	209.2	10.8	20,757	89.2
sulphuric acid	301	483	160.4	20.6	1,861	79.4
nitric fertilizers	229	293	128.1	27.8	763	72.2
phosphoric fertilizers	32	85	262.2	13.9	525	86.1
cement	1,686	2,971	176.2	13.7	18,769	86.3

articles and various types of food-stuffs (milk and animal fats) is higher in the FRG than in the GDR.

The successes in producing certain types of industrial goods per capita in the GDR are due to creative, socialist labor and the aspiration of the worker-peasant government to raise systematically the material well-being of the population. The increase in the scale of per capita consumption of the means of production and of consumers' goods was achieved in the GDR mainly because of the growth of labor productivity. Though at present the level of labor productivity in Western Germany still is higher than in the German Democratic Republic, the annual average increase in labor productivity in the former is lower than in our Republic. During 1950-1956 the growth of labor productivity per person occupied in industry in the GDR was 59.4%(10); in the FRG it was only 34.2%(11).

The split of Germany resulted not only in disproportions between the basic materials industry and manufacturing industry in the GDR but it also resulted in disproportions in various branches of industry and in commercial groups. In 1936 on the present territory of the GDR approximately 37% of all passenger automobiles were produced; the same territory produced only 14% of the entire German production of goods used by the motor-car industry (electro-technical equipment, materials and glass for automobiles). Such disproportions arose as a result of the split of Germany in other branches of machine building as well. The machine building industry that existed before the war on the territory of the GDR produced mostly means of production for the Department "B" (production of goods for consumption). Aside from this, one has to consider that during the war 70% of the means of production in machine building was destroyed in the GDR and 80% of the then insignificant means of metallurgy production.

No wonder that imperialist circles of the West have been trying for a number of years to utilize the split of Germany in order to hamper the development of the GDR economy. But, as time showed, they miscalculated badly, for they underestimated the power of the working class of our workers and peasants state, as well as the fraternal help of the countries of the socialist camp.

The liquidation or lessening of disproportions in the industry of the German Democratic Republic was achieved by the following means:

1) Maximum and rational utilization of all local deposits of raw materials; strict economy in the process of working on domestic and imported raw materials; the development of synthetic raw materials;

2) expanding those producing capacities which are needed for proportional development of the Republic's economy and the economies of other socialist countries;

3) constant increase in quantity and improvement of quality of industrial goods for export in order to import raw materials for industrial enterprises and food-stuffs for the population; raising the profitableness of foreign trade, which is one of the main branches of the GDR economy;

4) coordination of the development of production (first of all by cooperation) and capital investment, the development of science and technology, and also the development of foreign trade between the GDR and other socialist countries.

The economic basis for the successful realization of the measures listed above was the systematic extension of socialist ownership of the means of production in the Republic and strengthening the socialist sector in the sphere of circulation. Our successes, achieved under hard economic conditions, were possible because the economic development of the Republic is directed by workers and engineers, technicians and scientists devoted to the people. Our working class, depending on the initiative of the broad masses, is successfully solving the tasks of economic construction.

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The extension of commodity circulation on a large scale between the two German states — the GDR and the FRG — could be of great advantage for the population of both parts of Germany. It would lead to the elimination (to a certain extent) of various structural disproportions in their economies, to raising the standard of living, to decreasing market difficulties experienced by certain economic circles of Western Germany, to a rapprochement of both parts of

Germany in the interest of reuniting them in the future in a unified all-German state.

The German Democratic Republic government is striving to extend intra-German trade. But so far it has not been possible to achieve it, for the Bonn government is hindering the development of intra-German commodity circulation, trying to cause damage to the economy of the GDR.

From the data cited above concerning the pre-war structure of German industry and its distribution, from the analysis of the division of labor inside Germany, and the analysis of the consequences of the split of the country one can see that in pre-war Germany the commodity traffic inside the country was characterized by a supply of raw materials and various goods from Western Germany to the territory of the present GDR and a supply of manufactured articles from the eastern part of the country to North-Western, Western and Southern Germany. It should be underlined that the present territory of the GDR in pre-war time depended more on the intra-German commodity traffic than the present territory of Western Germany. The proportion between the net local production and supplies coming from other parts of the country used to be 9.7:4.1 on the present territory of the GDR, and 23.9:4.1 on the present territory of the FRG.

Recently the democratic forces achieved definite successes in the struggle for the extension of commodity circulation in the two parts of Germany. The volume of trade between Western and Eastern Germany in 1951 was 56.2% of the 1950 level; but, in 1954 it was 148.9%; in 1955 — 190.9%; in 1957 — 276.9%. But, as a whole, the volume of turnover still is less than one-quarter of the pre-war circulation.

One has to underline that the imperialist circles in the FRG are preventing a flow of raw materials, various goods and machines from the FRG to the GDR, expecting thereby to disorganize the German division of labor still further.

The volume of supply by the FRG of means of production to the GDR is extremely inadequate. In the pre-war years annually about seven million tons of coal and coke were delivered from the Ruhr district to the present territory of the GDR; in the period 1950-1956 the GDR received from the FRG only 0.4-0.5 million tons of coal and coke. In 1936 on the territory of the present GDR 2.1 million tons of rolled steel were used, of which 1.1 million were from Western Germany. In the period 1955-1956 an average of 0.1 million tons of rolled metal came to the GDR from the FRG.

The importance for the German Democratic Republic of the development of external economic relations is determined basically by four reasons:

1) the necessity for the GDR to undergo a rapid and planned extension of foreign economic relations arises from the fact that the international division of labor among the countries of the socialist camp is developing rapidly, according to plan and on the basis of mutual interest. This is so for every country in world socialist system, irrespective of its specific economic conditions;

2) the necessity for broad foreign economic relations for the GDR is determined by the high level of development of the German economy;

3) the necessity for the GDR to extend foreign trade is determined by the fact that it helps to reduce or eliminate disproportions and "bottle-necks" in the GDR economy created by war and the split of Germany;

4) the expansion of foreign trade is necessary to make up for the deficiency in the volume of intra-German trade.

Up to recent times the international division of labor in the world socialist system was realized on a large-scale indirectly by the extension of foreign trade relations. Now, direct coordination in developing the international division of labor among the socialist countries is more and more advancing to the foreground; this means a new stage in the development of the international division of labor in the world socialist system. Socialist production relations persistently demand this; the development of such production relations more and more successfully stimulate the growth of the labor forces, which is the basic advantage of socialist production relations compared with capitalist. Consequently, the specialization of socialist production is adjusting itself on an international scale. The more successfully international coordination of production develops in the socialist camp, the more effective labor will be in a given country. There will develop an increase in the norm of accumulation, a growth of consumption, and an increase of the volume of foreign trade and barter among various socialist countries.

Cooperation in industrial production among socialist countries, which has begun and is rapidly developing, is basically important for raising the level of the productive forces of the world socialist system (as well as for the expansion of exports from socialist countries to underdeveloped countries of the capitalist world). Agreements on cooperation in production (simultaneously with agreements on its standardization and typification) were concluded, in particular, between the German Democratic Republic and the Republic of Czechoslovakia at the end of 1956 and in early 1957. After negotiations between the governmental delegations of the GDR and the USSR held in January 1957, an understanding was achieved on cooperation between the machine building industries of both countries. In accordance with this understanding, on May 25, 1957 a protocol was signed in Moscow by the representatives of the GDR and the Soviet Union concerning methods of increasing the development of cooperation between the two countries in the field of machine building. In particular, an understanding on cooperation in the production of equipment for cement mills, equipment for the chemical industry, equipment for energetics, rolled steel processing, lifting and transportation, special machine tools, motor locomotives, power transformers etc. was achieved. Measures for determining mutual deliveries, coordination of work on research, designing and planning in the field of machine building were outlined.

The agreements on cooperation in production, concluded by the German Democratic Republic with the Soviet Union, Czechoslovakia and other socialist countries, secure our Republic an uninterrupted and complete loading of its productive capacities and the import of certain materials in short supply. This makes it possible to give up producing various articles which are metal-consuming and dependent on the import of raw material and other goods.

The mechanism of a planned, international division of labor among socialist countries can function properly only if all its component parts are well coordinated. That is why the daily struggle of the workers of every socialist country for the successful fulfillment of the plans of their economy, on the one hand, and the policy of proper coordination of national interests with the needs of the world socialist system as a whole, and the education of the toilers of socialist countries in the spirit of proletarian internationalism, on the other hand, play an important role in extending and strengthening the international division of labor in the world socialist system of economy.

With the proper coordination of production of socialist countries the tempo of growth of trade among these countries, undoubtedly, will increase. The interchange on the basis of international specialization in machine building products and cooperation in production favor the growth of commodity

circulation in the socialist camp. This also explains the fact that the share of machine building in the total exports of the GDR will not decline, but, on the contrary, will increase. The absolute and relative growth of international trade of the means of production in the world socialist system of economy is one of the objective laws of development of this system.

If one considers the interrelations between industrialization, the international division of labor and foreign trade and their role in the development of the national economies of individual socialist countries, then, in our opinion, the following formulation in the textbook "Political Economy" is erroneous: "Foreign trade under socialism...serves as an additional source of resources for the development of production, the utilization of the achievements of world technology and the improvement of the supply of consumption goods."(12)

The definition of foreign trade as an "additional" source would be more correctly applied to the Soviet Union in the period between two world wars. In a world socialist economic system, foreign trade between socialist countries is not an additional source of development of production, but an historically necessary and essential element of the process of reproduction.

The workers and peasants government of the GDR, considering the important role of foreign trade in the process of socialist reproduction, pays great attention to the expansion of foreign economic relations of the Republic.

Growth of foreign trade of the GDR and FRG in 1950-1957 (1950 = 100)(13)

	Exports		Imports	
	GDR	FRG	GDR	FRG
1951	207	174	138	129
1952	217	202	178	142
1953	275	222	225	141%
1954	360	264	243	170
1955	350	308	255	215
1956	384	369	291	246
1957	492	430(14)	359	278(14)

In the development of GDR foreign trade considerable success has been achieved. The tempo of growth of GDR foreign trade, as a rule, is higher than that of the FRG. The latter began and continues to realize a broad imperialist expansion on foreign markets with the help of state subsidies and other means.

The basic part of foreign trade of the GDR is with the socialist camp, which is the stable base of her foreign trade and its entire economic development. (See table A on the next page.)

The close economic cooperation of the GDR with other socialist countries does not exclude its interest in expanding trade relations with other countries of the world, nor the possibility of such relations. But the fact that governments of many capitalist countries do not want or do not dare to recognize the GDR as a sovereign German state, is a serious obstacle for the extension of trade with non-socialist countries. This, in particular, explains the fact that the German Democratic Republic occupied in 1954 and 1955 the last place among the European states of the socialist camp in its share of foreign trade (10%). Yet this does not correspond either to the real possibilities of the GDR or to the political aims of the government of our Republic. The government of the GDR has set the task of achieving by 1960 an absolute and relative increase in the volume of foreign trade of the Republic with non-socialist countries, with special attention to the expansion of foreign trade with the economically underdeveloped countries.

The trade and credit relations with the Soviet Union — the outstanding trade partner of the Republic — have decisive significance for the successful economic development of the GDR. The Soviet Union supplies the GDR with oil, coal, ores, steel, grain, cotton and also important means of production; the GDR exports to the USSR mainly chemical products, machines, vessels, precision instruments and optical equipment. In 1955 more than 75% of the total export of the GDR to the Soviet Union represented machines and equipment. During the same year about 75% of imports of the German Democratic Republic from the USSR were raw materials, fuel and semi-manufactured goods.

When the German Democratic Republic has economic difficulties, the Soviet Union always renders it fraternal help (in this respect one has to stress the great importance of governmental agreements concluded between the GDR and the USSR in August, 1953 and in January, 1957). Thanks to the help of the USSR the supply of GDR industry with raw materials and of the population with food-stuffs improved considerably. Our Republic receives from the Soviet Union 86% of the total imported cotton and 80% of imported grain.

The commodity structure of the foreign trade turnover of the GDR corresponds to the structure of foreign trade of an highly industrialized country. In its exports the finished articles occupy first place, and in its imports raw materials and food-stuffs. One has to note the fact that no other socialist country has such a relatively high proportion of means of production in its exports. For instance, in 1955 machines and equipment represented 60.4% of the GDR exports; 43.5% of Czechoslovakia's; 22.1% of the USSR's; and 13.1% of Poland's.

In considering the perspectives of development of the international trade of machines and equipment in the world socialist economic system one has to take into account two circumstances: first, with the broadening of the international division of labor in the field of machine building and the production of equipment the import of these goods into the GDR will increase in absolute and relative terms; second, in connection with the fact that socialist countries are paying growing attention to the international specialization of production and to a more intensive exchange of industrial consumption goods the specific weight of these commodities in the exports of the GDR will increase. This will make it possible increasingly to satisfy the needs of the population in the socialist countries for the necessary commodities in quantity and in assortment.

For the economy of the GDR a high proportion of exports of many types of finished goods and a high proportion of imports of raw materials and foodstuffs is characteristic.

The calculation of such proportions, as is known, is bound with serious difficulties. It is much simpler to calculate (though in approximation) the turnover of foreign trade per capita of population.

Turnover of foreign trade of Germany per capita of population (in 1928-1955)

(on the basis of average annual population; in marks of corresponding currency)

	1928	1936	1951	1953	1955
All Germany	408	133	—	—	—
GDR(16)	—	—	259	376	589
FRG(17)	—	—	414(18)	605	984

The above data testify to the considerable growth of foreign trade in Eastern and Western Germany. But the vol-

Foreign trade of Germany with countries of Eastern Europe during 1928-1955
(% of total export or import)

Ⓐ	Germany						FRG		GDR	
	1928		1932		1936		1955			
	import	export	import	export	import	export	import	export	import	export
USSR(15)	2.7	3.3	5.8	10.9	2.2	2.7	0.5	0.4	40.5	45.2
Poland	2.5	3.3	1.3	1.2	1.4	1.1	0.5	0.4	11.0	10.8
Czechoslovakia	3.8	5.4	3.0	4.4	2.7	2.9	0.5	0.2	6.8	8.2
Hungary	0.5	1.3	0.8	0.8	2.2	1.7	0.5	0.6	6.0	4.0
Rumania	1.3	1.4	1.6	1.1	2.2	2.2	0.1	0.2	3.6	2.2
Bulgaria	0.4	0.3	0.7	0.4	1.4	1.0	0.1	0.1	3.0	1.9
Albania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
Yugoslavia	0.5	1.0	0.0	0.8	1.8	1.6	0.6	0.9	0.2	0.2
	11.7	16.0	13.2	19.6	13.9	13.2	12.8	2.8	71.2	73.0

ume of the turnover per capita is lower in the GDR than in Western Germany. In the cited data changes in prices are not considered. But if the changes in prices were considered, then the level of foreign trade turnover in 1928 (when prices were higher than in 1936) has already been surpassed in the FRG but in the GDR has not yet been reached.

Official census data made it possible for us to calculate the share of exports in the production of various branches of GDR industry in 1954 in percentages of the commodity production of corresponding branches (in selling prices).

The share of exports in the production of various branches of industry in the GDR in 1954 (in round figures)

Machine building production	30
of this:	
heavy machine building production	37
of this:	
production of machine tools, forge hammer and press equipment	60
production of lifting and transport equipment	63
production of steel assemblies	2
General machine building production	30
of this:	
agricultural machine production	3
production of machines for the textile industry	45
Production of machines for transport	35
Production of ship-building	50
Production of the electro-technical industry	22
Precision and optical instruments	45

As a whole, the share of exports in the production of industry in the GDR is approximately 12%. This relatively low average figure compared with some types of production is explained by the insignificant share of exports in the production of such important branches of industry as the light and food-stuffs industries, mining, metallurgy, etc.

The data cited above testify to the fact that exports of industrial goods from the GDR now is higher than in 1934, but has not reached the level of 1928 or 1932. But on this basis one cannot yet make a final evaluation of the interrelations between foreign trade and reproduction, especially because in one case it was a monopoly-capitalist economy, and in the other — predominantly a socialist economy. Considering the relatively lower share of exports in the industrial production of the GDR compared with pre-war Germany, as well as other data given in this article concerning the role of foreign trade relations in the process of reproduction in GDR industry, one can draw the conclusion that the share of exports in the industrial production of the GDR still does not correspond to our possibilities and requirements. The increase of the share of exports in industrial production is necessary in the interests not only of the development of GDR industry, but of the economic development of other socialist countries. This can be achieved on the basis of the proper international specialization and cooperation in production in the world socialist economic system.

The proportion of imports in the total amount of food-stuffs and raw materials consumed in the Republic is very high. In 1955 it was the following percentages of totals (in round figures):

Coal	70	Cotton	100
Iron ore	45	Wheat	30
Pig iron	15	Butter	10
Copper	30	Vegetable oil	35
Steel plate	35	Fish	70

The German Democratic Republic receives the most important types of raw material from the socialist camp, mainly from the Soviet Union. For instance, the USSR supplies the GDR with most of the ores, steel plate, cotton and grain, imported by it. The share of socialist countries of various types of raw material imported by the German Democratic Republic amounts to 70-100%.

Thus foreign trade has enormous importance for the process of reproduction in the GDR economy, for the tempo of development and for securing planned and proportional growth. The contribution of the GDR to the industrial development of countries of the socialist camp is great. The working people of the GDR are making every effort to enlarge the export capacity of the Republic, improve the quality and lower the prices of export goods. As the data given in this article show, workers of the GDR have achieved considerable success in development of the productive forces of the Republic. But one cannot be content with this. With the improvement in the economic organization of the German Democratic Republic and the growing coordination of the national economic plans of socialist countries, the intensity of our foreign trade will increase, and at the same time the profitableness of our national economy will grow.

In spite of the difficult economic conditions resulting from the split of Germany, the economy of the German Democratic Republic, as a component part of the world socialist system of economy, is marching on the road of steady improvement.

(Continued on Page 95)

S. Kheinman:

Bourgeois Economists on Soviet Industry

A basic feature characterizing current international life is the economic competition of two systems, socialism and capitalism, and the struggle of two opposing ideologies, the socialist and capitalist. Socialism has gained a world-wide historical victory. About one billion people are building a socialist and communist society.

The attention of bourgeois economic science, particularly in recent years, has been absorbed with the "Soviet phenomenon." One after another, studies are released by bourgeois economists devoted to analyzing the growth of the Soviet economy. The authors of these studies, with all of their enmity toward socialism, are forced to recognize our successes. It would be naive, however, to assume that these "recognitions" are dictated by an attempt to arrive at the truth. The writings of many public figures and organizations, in particular the Joint Economic Committee of the Senate and Congress of the USA are to a considerable degree dictated by the desire to frighten people with the so-called "Communist menace." Many individuals and organizations connected with monopolies do this with the purpose of obtaining greater subsidies from the state. Meanwhile, all of them understand that the successes of the USSR have a great attractive power for the peoples of dependent and underdeveloped countries and for wide groups of people in the capitalist countries. This prompts the apologists of capitalism to do everything possible to belittle the significance of the successes of the socialist camp, to convince the masses that these successes are imaginary, etc.

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The staff of the Joint Economic Committee of the Senate and Congress of the USA has prepared an extensive account, the introduction to which states: This study represents a notable assembly and analysis of the best available data for comparing the status and the growth trends of the economies of the Soviet Union and the European countries of the Soviet bloc on the one hand and of the United States on the other. In preparing this report universities and private research organizations have been involved and 40 of the greatest specialists have been consulted.(1)

"It seems that Soviet industry," recognize the authors of the report, "has grown faster than United States industry did at comparable stages of development" and "in the postwar period the Soviet growth rate appears to have been definitely higher than that of the United States" (pp. 140, 144).

At the discussion at Milan organized by the so-called Congress of Cultural Freedom, Peter Wiles, Fellow of New College of Oxford University declared: "The truth about the greater rate of Soviet economic growth is pro-Communist propaganda hard to counter. The Communist threat is partly one of economic growth. In reply to it neither virtuous conduct, nor rearmament, nor reason, nor psychological warfare, nor cultural freedom are altogether enough. The rate of economic growth must be stepped up."(2)

The very title of Wiles' report is significant: "What is to be done about the success of Soviet industry?" This, as well as the content of the report is not at all sympathetic or partial to a socialist economy. "Perhaps the most important fact in all modern economics is that," stated Wiles, "the rate of growth is higher in the manufacturing industry of the Soviet Union than in that of any free country at the period of its maximum development" (p. 27). Further, he presents the following figures for the average annual rates of growth of industrial production (in %):

USSR(3)	1928-1940	12.5
USSR	1949-1954	12.0
USA	1860-1914	5.3
Japan	1910/14-1935/38	7.2

"My own fears," stated Wiles in his second presentation, "are based on post-war performance. Productivity in industry rises very swiftly. More complex machines are turned out and better maintained. Consumption rises very rapidly ...It is to this threatening (!) new picture that we must bend our minds..." (pp. 122-123).

At the same discussion in Milan Sidney Hook, head of several Philosophy Departments in American colleges, expressed himself even more clearly. "We are concerned," he stated, "with the question of economic growth in the Soviet economy, because we fear that in certain countries man people, impressed by it, in their chase for increased production may sacrifice values which we regard as basic..." (p. 99).

The head of the Bureau of Research Associations on the Economic Development of France who is quite popular in Western economic circles, Bertrand de Jouvenel, in a malicious, not objective speech at the Congress in Milan made the following admission: "Nobody in the USA denies that a large part of the gap between the two [USSR and USA — S. Kheinman] has been filled. It is admitted in the West that the Soviet Union is now the second industrial power in the world, far ahead of Great Britain and Western Germany. It is recognized that between 1929 and 1955 Soviet industrial production as a whole has developed far more rapidly than that of any other country" (p. 52).

In a big article, "Soviet Economic Growth," published in the January 1957 number of the journal "Foreign Affairs," the prominent American economist Calvin B. Hoover wrote: "If our estimate is reliable, it will be roughly a decade and a half before the productivity of the Soviet economy could equal that of the United States at the present time. In the meantime, a Soviet rate of economic growth almost twice that of the United States would reflect a factor of great force in the present world conflict."

The well known British economist, Colin Clark, in opening the discussion in Milan declared in his report: "Accepted as unquestioningly as any cliche of textbook history, we now get such statements as: 'Soviet production is increasing at a rate...far faster than in any other country' and 'it will only be a matter of time before Russian productivity and living standards overtake American, however advanced the latter may be now.'"(5)

In making all of these somewhat unpleasant admissions,

* Quotations from works in English have been checked where possible. Otherwise they have been re-translated.—Trans.

bourgeois scholars attempt to portray Soviet rates as lower than they really are, to minimize their importance, and obliterate the fundamental superiority of a socialist economic system. The attempts to minimize the successes of the socialist economy take three basic forms.

The first form. Since it is well known that the rate of growth of US industrial production in the 20th century has not exceeded 3-4% per year, attempts are made to dispute and recalculate the Soviet indices of growth of industrial production and thereby to portray them as being lower than they really are.

The second form. Since it is impossible to dispute and "recalculate" the rates of growth in production of individual concrete types of products of Soviet industry (pig iron, steel, coal, oil, electrical energy and so on), attempts are made to select periods for comparison, both for the USSR and for the USA, in a tendentious manner that would permit the obliteration of the incontestable superiority of socialist industry.

The third form. In explaining the reasons for the high rates of growth of Soviet industry, bourgeois economists attempt to understate and to hide from the people of the world the great superiority of the socialist economic system.

Let us examine in greater detail each of these three forms.

The following data characterize the average annual rates of growth of industrial production in the USSR and the USA.(6)

	USSR		
	All Industry	Large Scale Industry	USA
40 Years (1918-1957)	+10.0	+11.4	+3.2
12 Years (1918-1929)	+ 6.9	+ 9.7	+3.0
11 Years (1930-1940)	+16.5	+18.0	+1.2
5 Wartime Years (1941-1945)	- 1.7	+ 1.5	+9.8
11 Post-war Years (1947-1957)	+15.9	+16.5	+4.7

In the studies which we analyze, attempts are made to "correct" these rates of growth of Soviet industry.

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The "Assumptions" of Mr. B. de Jouvenel

B. de Jouvenel does this most "simply." Presenting a report at the Milan discussion he declared directly: "To explain some aspects of Soviet economic growth, rough working estimates will serve our purpose." Following this, without going through the trouble of demonstrating these "rough working estimates," the author states: "Let us assume that it [Soviet industry — S. Kheinman] increased by 9-10 times between 1928 and 1955."(7)

On what does B. de Jouvenel base his "assumptions"? He depends on a comparison of the dynamics of steel production and the dynamics of the over-all volume of industrial production. Since his proposition that the total output of industry cannot increase much more rapidly than steel output is widely used by bourgeois economists to dispute the rate of Soviet industrial growth, let us examine it more closely.

There is no doubt that ferrous metals, and first of all steel, play an important role in the development of modern industry. But from this incontestable proposition it does not necessarily follow that the rate of growth of steel production can serve as a measure of the rate of growth of all industrial production. The latter is also determined by improvements in the utilization of equipment, perfection of technique and technology, the growth of labor productivity, etc. In the recent period along with steel, and much more rapidly than steel, all sorts of plastics and other synthetic materials are being used in the production of means of production.

Therefore, the assertion that the increase in industrial production cannot markedly exceed the increase in steel output is completely invalid. As we will show further, it is refuted by the actual results of the development of American industry. Even the very same B. de Jouvenel refutes his own position. "The more industrially developed a country is," he states in his report, "the more its total industrial production can expand in relation to its output of capital goods" (p. 54). However, immediately after this B. de Jouvenel states, "In the United States the index of total industrial output increased between 1929 and 1953 by 15% more than the increase in the output of steel. If the same relation holds good for the Soviet Union, a ninefold increase in the production of steel would give an increase of 10.35 times for total industrial production." Thus, on the basis of deductions drawn from formal logic, despite facts and figures, the rate of growth of industrial production is arrived at.

Mr. de Jouvenel will excuse us but we are forced to state that the figures he presents are based upon a direct falsehood.

We present the corresponding American official figures; steel production (in American short tons) increased from 63.2 million in 1929 to 111.6 million in 1953 or by 77%.(8) The index of industrial production for the USA, according to the Federal Reserve Board figures, increased during this period from 58 to 136 or by 134%.(9) On the basis of these two figures we can, by simple division, establish that in the USA the increase in industrial production from 1929 to 1953 exceeded the increase in steel output not by 15% as B. de Jouvenel declares but by 74%. This relationship is not of an accidental character. Figures for the USA for other periods testify to this:

	Steel Production (thous. short tons)	Index of Industrial Production
1918	49,798	254(11)
1929	63,205	364(11)
1955	117,036	920(12)
1929 in % of 1918	126.9	143.3
1955 in % of 1929	185.2	252.8

We have included 1918, the year of maximum steel output in the period prior to the crisis of 1920, 1929, also the year of maximum output prior to the crisis of the 1930's, and 1955, the year of maximum steel output in the post-war period. Therefore, in the period 1918-1929 the index of industrial production of the USA exceeded the increase in steel output by 61% — (43.3 x 100)/26.9 — and in the period 1929-1955 by 79% — (152.8 x 100)/85.2.

Where did the 15% come from? However, B. de Jouvenel's rope-walking manipulations of statistical data are, indeed, not confined to this. Here is how he proceeds.

From 1928 to 1953 steel production in the USSR actually grew nine times (from 4.3 million tons to 38.1 million tons or by 8.9 times).(13) Increasing this growth by 15% and rounding the resulting figure (downward, of course) B. de Jouvenel obtained an increase of 10 times for total industrial production in the USSR. But on the following page he writes: "Let us assume that it [industrial production of the USSR — S. Kheinman] has increased nine-to-ten-fold between 1928 and 1955 (?!)" with 1953 in the process being replaced by 1955.

But the "trouble" is that from 1953 to 1955 steel produc-

tion in the USSR increased by 7.1 million tons and consequently exceeded 1928 production not by 9 times but by 10.5 times (from 4.3 million tons to 45.3 million tons).(14) Then, even if we apply the postulate of B. de Jouvenel and use, in the face of facts, the excess of growth in all industrial production over the growth of steel production in the USA as a measure for determining the increase in total Soviet industrial production, we obtain from 1928-1955: 10.5 times increased by 79%, that is, an increase of 18.8 times and not 10 times as "assumed" by de Jouvenel. The index of the Central Statistical Administration of the USSR for 1955 in percent of 1928 was 2.069 (an increase of 20.7 times).(15) During this period the production of electrical energy increased by 34 times, the output of machine tools by 58.5 times, of turbines by 126 times, the production of mineral fertilizers by 71.5 times, of cement by 125 times(16) and so on.

Meanwhile, B. de Jouvenel, arbitrarily "assuming" that Soviet industrial production grew by "9-10 times" from 1928 to 1955, manipulates these figures as though he has already proved their correspondence to reality. Since the number of industrial workers according to data of the Central Statistical Administration (which in this case B. de Jouvenel does not dispute) increased by 4.5 times from 1928 to 1955, having no doubts he divides 10 by 4.5 and derives an increase in labor productivity of 3% per year. "And if," he writes further, "as the majority of Western experts believe, an eightfold increase in Soviet industrial production is more likely, then productivity per head increased by 2% annually."(17)

Enjoying these "scientific" calculations B. de Jouvenel constructs the following table:

If the annual increase in labor productivity was equal to (in %)	If the industrial labor force increased by 4.5 times, the total output of industrial production in the 27th year (the base year being 100) should be
0	450
1.0	582
1.5	672
2.0	768
2.5	876
3.0	999

In this table only one figure is correct: the increase in the number of workers by 4.5 times. But this does not disturb the author. "From this table it appears that, even accepting the highest estimate of industrial growth [our emphasis — S. Kheinman], the principal factor in that growth was the expanding labor force, the rise in productivity being only secondary" (p. 56).

Thus, the "method" of B. de Jouvenel is very simple: he takes arbitrarily a figure for the increase in industrial production (10 times) which in this case is one half of the true figure, then divides it by the actual figure for the increase in the number of workers and obtains the "growth" in labor productivity. Then, "forgetting" the origin of this figure and taking it seriously, multiplies it by the increase in the number of workers. By the laws of arithmetic he again obtains the figure "10" and calls it "the highest estimate of industrial growth." On the basis of this falsified index of growth in labor productivity he denies its decisive importance in increasing the volume of industrial production of the USSR.

In the meanwhile it is known that the increase in labor productivity has been the main factor in the growth of industrial production in the USSR. The increase in labor productivity accounted for: 51% of the whole increase in industrial production during the First Five Year Plan, 79% during the Second Five Year Plan, 69% during the war years and the Fourth Five Year Plan and 68% during the Fifth Five Year Plan.(18)

How Indices Which "Lower" the Rate of Growth of Soviet Industrial Production Are Constructed

A more thorough study was done by Professor Donald R. Hodgman of the Russian Research Center of Harvard University (USA). He has written a special voluminous monograph, "Soviet Industrial Production, 1928-1951,"(19) and an article in the collection "Soviet Economic Growth" issued by Columbia University in 1953. Hodgman's calculations are viewed, both in the USA and in Western Europe, as the most reliable source for judging the rates of growth of Soviet industrial production. The calculations of the Joint Economic Committee of the Senate and Congress of the USA are based on Hodgman's material. Therefore, it is necessary to analyze carefully the content of this study.

Hodgman calculated and published his "corrected" indices of production of large scale industry of the USSR for the period 1928-1937 and 1937-1951. He worked out these indices by utilizing the time series for a certain selection of industrial products and the pay rolls of the corresponding industries as weights. In the opinion of the author this method approximates the method of calculating net output instead of gross output which Hodgman views as a deficiency of the published indices of Soviet statistics.(20) The method used by Professor Hodgman in constructing the indices of change in Soviet industrial production is described by the author as follows: "The total weight of an industry or industrial group in the production index is proportional to its share of the total annual industrial pay roll for 1934. The over-all weight for an industry is subdivided among the available quantity series for products produced in that industry according to the actual or estimated share of these individual products in the total labor cost of the industry. The total weight for a given industry is assigned to the available product series regardless of whether or not all products produced by the industry are represented... This procedure assumes that the missing series move with the weighted average of the available series. The final index is a weighted mean of quantity relatives" (pp. 33-34; our emphasis — S. Kheinman).

From this description of the method used by Professor Hodgman it is clear that the decisive criterion of the quality of his indices is the representativeness of the selected industries and types of output. We present the results of Hodgman's calculations for 1928-1937 (1934 = 100):(21)

Years	Revised Index	Official Soviet Index
1928	46.6	32.8
1932	76.0	76.6
1937	160.3	180.6

The reasons for these divergences are not difficult to discover. The major reason is the tendentious choice of products. As the author reports, he has included in the index only 137 industrial products. From the table published in the study under review (p. 56) it is clear that the group of industries included by Hodgman in the calculation of the index covers only 4,082,000 workers or 55% of the 7,404,000 workers occupied in Soviet industry in 1934.

Which industries are excluded by the author? First of all, a considerable part of the metal working and machinery industry (1,277,000 workers) which developed at the most rapid rates is not included as well as the lumber and woodworking industry (1,131,000 workers). While the workers in the metal working (including machinery) industry constitute 25.5% of all workers in Soviet industry they constitute only 15% of the workers in the branches of industry included by Hodgman. It is known that while total Soviet industrial production grew by 346% from 1928 to 1937, machinery and metal working production increased by 11.3 times or by 1,028%.(22)

The way in which this lowering of the relative weight of the metal working industry affects changes in the total index of all industrial production can be easily calculated, using the number of workers as weights.

	Weight of Industry According to Number of Workers 1	Index of Increased Production During 1928-1937 2	Sum of Percentages 1 x 2
I. All Industry	100	446	44600
II. Machinery and Metal Working	25.5	1128	28764
All Other Industries (I-II)	74.5	213	15836

If we take these rates of growth in production but the weights used by Hodgman the result will be the following:

	Weight of Industry According to Number of Workers 1	Index of Increased Production During 1928-1937 2	Sum of Percentages 1 x 2
I. Machinery and Metal Working	15	1128	16920
II. All Other Industries	85	213	18105
All Industry (I + II)	100	350	35000

The total index of industrial production with this reduction of the relative weight of the machinery and metal working industry is lowered from 446 to 350, that is, to the level of the index constructed by Professor Hodgman. In the table on p. 73 of his monograph we read the following:

	Revised Index	
	Unadjusted	Adjusted
1928	46.6	43.7
1937	160.3	162.2
1937 in % of 1928	344.0	371.0

By no means can Professor Hodgman's method of constructing indices of Soviet industrial production be recognized as scientific and the results he obtains as reliable. Calculations of this sort violate elementary principles of scrupulous scientific investigation. In his monograph, Professor Hodgman does not confine himself to artificial distortions of the relative weights of branches of industry. He constructs indices for individual branches of industry and first of all for the machinery and metal working industry. According to Hodgman (p. 59), in calculating the index he did not include repair enterprises, a large part of shipbuilding enterprises, transportation machinery, the output of various types of equipment and military production. Taken together, these branches of industrial production according to Hodgman's estimate comprise 38% of net output of all of Soviet industry and 67.6% of net output of the whole metal working industry. Therefore, his calculation does not include more than two-thirds of the metal working industry, including all of the military metal working industry.

In selecting the type of products for which the index is constructed Hodgman committed a number of factual mistakes which resulted in an artificial reduction of the dynamics of growth of Soviet industrial production. Thus, for example, for steam boilers an output of 87.9 thousand square meters of area is shown for 1928, 166.4 thousand for 1932 and 170.4 thousand square meters for 1937 (p. 199). The actual figures are: 1928 — 87.9 thousand square meters, 1932 — 163.3 thousand, 1937 — 268.2 thousand square meters. Thus, Hodgman's increase is 1.0 times and not 3.05 times as occurred in reality. The production of generators, whose output increased during this period by 7.5 times, and of electric motors, whose output (in horsepower) grew by 7.1 times are not included.(23)

All this has resulted in an index of machinery and metal working output of 625 derived by the author instead of the actual 1,128.(24)

An analogous procedure was followed for the chemical industry. In the index for basic chemicals Professor Hodgman included only soda ash, sulphuric acid and superphosphate. How "objectively" these products were chosen may be seen from the following comparisons. The increase in production between 1928 and 1937 was: 143% (from 217.3 thousand tons to 528.2 thousand tons) for soda ash, included by the author in the index; 179% (from 58.6 thousand tons to 163.7 thousand tons) for caustic soda, not included by the author in the index. The production of phosphate fertilizer, included by the author in the index, increased by 13.2 times while that of nitric and potash fertilizer, not included by the author in the index, increased by 99.7 times and that of all fertilizers increased by 23.9 times.(25) The total index accepted by the author for the chemical industry is 533 instead of the actual 1,048.(26)

That is the way matters stand with Professor Hodgman's index for the period 1928-1937.

Hodgman then goes on to construct an index of industrial production for the USSR for 1937-1951. Let us examine the results of his calculations (p. 84; 1937 = 100):

Years	Revised Index Based on 22 Commodity Series	Official Index
1940	102.6	144.7
1946	73.0	111.4
1951	177.0	292.3

What are the reasons for such considerable divergences between these indices? It appears that D. Hodgman, in constructing the indices for 1937-1951, permitted even greater departures from elementary norms of scientific methodology. Here is Hodgman's own admission: "Not only are the underlying data less reliable for the years 1940 and 1946-1951 but the coverage of branches of industry in the revised index is sharply reduced from 137 commodity series in the base year 1934 to 22 product series in the years 1940 and 1946-1950 and only 18 product series in 1951." Then the author enumerates the "22 product series which enter into the revised index in the years 1940 and 1946-1950: coal, crude oil, electric power output, pig iron, steel, rolled steel,

cement, paper, glass, cotton cloth, woolen cloth, silk cloth, soap, sugar, vegetable oils, fish, canned goods, confections, beer, cigarettes, tractors, and motor vehicles. The most important omissions," as Hodgman himself admits, "are chemicals, nonferrous metals, the bulk of machinery production, and military products" (pp. 81-82).

It must be admitted that in the selection of industries constructing the index the author used a certain "logic."

	Base Year	Index of Industrial Production		
		1937	1951	1951 in % of 1937
All Industry(27)	1913 = 100	588	1718	292
Large Scale Industry(27)	1913 = 100	816	2411	295
Machinery and Metal Working(28)	1928 = 100	1128	5000	443
Chemical Industry	1928 = 100	1048(28)	3824(29)	365

All three large branches not included in the index grew considerably more rapidly than those included.

It is not difficult to calculate what this choice of branches provided for Professor Hodgman. The relative weight of those branches not included by him, measured by the number of workers, comprised in 1950 (in %):

machinery and metal working	30.3
chemical industry	2.7
nonferrous metals (estimated)	2.3

Therefore, the number of workers in these branches comprised 35.3% of the number of workers in all industry. From this we can calculate by how much the inclusion of these branches would have changed the production index for all industry constructed by Hodgman. (See Table A below.)

The index number 177 calculated by Professor Hodgman is converted to 267 as a result of this simple correction, that is, it approaches the actual index number of 292 published by the Central Statistical Administration of the USSR. Later Hodgman adjusts his index number by 13% and it becomes 200. Finally Hodgman derives the final index number for 1928-1951: (371 x 200)/100 = 742 instead of the "official" one which he presents as 1,610. The indices published by the Central Statistical Administration for this period are as follows: 1,302 for 1951 in relation to 1928 for all industry and 1,586 for large scale industry.

In an addendum to his monograph Hodgman gives an industrial production index of 138 for large scale industry for the period 1950-1953 compared to the "official" one of 144.(31) This permits him to extend his index from 1928 to 1953. To do this, the index number for 1950 (with 1928 = 100), 646(32), is increased by 38%: (646 x 138)/100 = 891.5. Here it must be noted that the index number for 1950-1953, 144, called the "official Soviet index" by Hodgman does not correspond to reality. The actual index number for Soviet large scale industry for this period was 147.8.(32) As we already noted, Hodgman's indices are taken as the basis for the estimates of the Joint Economic Committee of the Senate and Congress of the USA in comparing the rates of growth of industrial production of the USSR and the US. We present these estimates:(34) (See also Table B below.)

	USA			
	1928-1955	1867-1907	1950-1955	1922-1927
Indices	100-262	100-773	100-124	100-130
Annual Rate of Growth	3.6	5.2	4.4	5.3

The index accepted by the Joint Economic Committee of the Senate and Congress of the USA (750 for the period 1928-1955) is calculated in the following manner. Using Hodgman's index as the basis, the relative weight of small scale industry and home production in all of Soviet industrial production is determined as 25% in 1928 and 5% in 1955.(37) The relationship of industrial output in 1928 to that of 1927/28 is taken as 105. Then the calculation proceeds according to the following formula:

$$\frac{1085 \times 1.05}{100 \times 1.05 \times 1.33} = \frac{1139}{140}; \frac{1139 \times 100}{140} = 816.$$

In the numerator the index for 1955 is increased by 5% for

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	Relative Weight Based on Number of Workers 1	Index of Production in 1951 (1937 = 100) 2	Sum of Percentages 1 x 2
Branches included by Hodgman in his index	64.7	177	11,452
Branches excluded:			
Machinery and Metal Working	30.3	443	13,423
Chemical Industry	2.7	365	986
Nonferrous Metals	2.3	370(30)	851
All Industry	100.0	267	26,712

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	USSR		
	Official Data	Hodgman's Estimates	Data of Joint Economic Committee of Senate and Congress of USA
1928-1955			
Indices	100-1900(35)	100-1085(36)	100-750
Annual Rate of Growth	11.5	9.2	7.7
1950-1955			
Indices	100-185	100-168	100-160
Annual Rate of Growth	13.1	10.9	9.9

the inclusion of small scale industry and in the denominator 5% is added to the index for 1927/28 for the transition to the calendar year 1928 and 33% for the inclusion of small scale industry. The resulting index of 816 is corrected for territorial changes occurring in the USSR after 1939 (91.8%) and in this way an index of 750 is derived. It is hardly worthwhile to analyze the reasons why such qualified specialists as those consulted by the Joint Economic Committee of the Senate and Congress of the USA accepted Hodgman's estimates without any criticism. The correction for territorial changes introduced by the committee is apparently correct judging by the relationships shown in the handbook "Industry of the USSR" (p. 31) where the coefficient 91.6 is indicated.

The production index for all Soviet industry for the territorial boundaries prevailing before September 17, 1939 is 2729 and for Soviet territory in current boundaries it increased by 25 times. Therefore, the correction is equal to: $(2500 \times 100)/2729 = 91.6$. With this coefficient the index for all industry (1928-1955) becomes $(2069 \times 91.6)/100 = 1895$, which corresponds to the rate of growth of 11.5% shown in the Committee's report. Thus, the Joint Economic Committee of the Senate and Congress of the USA artificially reduced the rate of growth of Soviet industry for the period 1928-1955 from 11.5% to 7.7% per year and for the period 1950-1955 from 13.1% to 9.9%. True, this did not save the committee from "sad" conclusions. The rates of growth of industrial production in the USA, not only during 1928-1955 (3.6% per year), but also during the 40 year period of maximum growth 1867-1907 (5.2% per year) were substantially lower than even the artificially reduced rates of growth of socialist industry. During 1950-1955 the annual rate of growth of American industry was 4.4%, that is, it was three times lower than the USSR rate and 2.25 times lower than the deliberately reduced increase in USSR production calculated by the committee.

In its report the Joint Economic Committee of the Senate and Congress of the USA arrives at some quite sober conclusions. "The really important fact," the authors of the report recognize, "which must not be obscured by dissension over rate comparisons versus absolute gap comparisons is that the Soviet Union has created the essential industrial base with sufficient versatility and technological backing to support serious efforts in armaments production of an advanced order and to expand the productive capacity of their economy still further."(38)

The Joint Economic Committee of the Senate and Congress of the USA also analyzed in detail the rates of growth in the production of the major branches of Soviet industry. "The rates of growth of output of heavy industrial goods," notes the Committee in its report, "have been markedly faster in the USSR during both 1928 to 1955 and 1950 to 1955. Further, it appears that starting from approximately the same output levels as in the USSR in 1950, it took the United States more years in the branches of industry shown except for tractors, trucks, and automobiles to duplicate the increases in output realized in the USSR in the five years from 1950 to 1955." In machinery the Joint Economic Committee of the Senate and Congress of the USA notes that "the Soviet rates since 1928 are significantly greater than the United States rates during most periods of this century; and there is little doubt but that current rates of growth of machinery output are significantly greater in the USSR than in the United States."(39)

In the report presented to the Senate and Congress of the USA the Committee gives an estimate of the perspectives of growth of Soviet industry. Both the admissions and some comments of the Committee are of considerable interest.

"Independent technological progress in the USSR has been rapid and significant in recent years... In the future, Soviet authorities will be able to rely on significant technological improvements to boost their industrial output. It may be worth noting," the authors of the report comment, "that some of the progress which lies ahead is not just one of introducing new technology, but of finding the right balance of techniques to yield lowest cost, not always easy for the Russians in the absence of good cost data and the market mechanism. There are many opportunities for applying existing technology in such activities of industries as, for example, auxiliary industrial processes and services" (p. 41). Some increase in capital investment in auxiliary work in branches of heavy industry will result, in the view of the Committee, in a rise in the "productivity of capital" (p. 45). Discussing the reorganization of industrial administration undertaken in the USSR the Committee notes: "In view of... the greater decentralization of planning and controls in general, there is some reason to believe that the administration of industry will function more effectively" (p. 46).

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Six Falsehoods of Professor Nutter

It was noted above that one of the tendencies in the work of bourgeois economists is to diminish the successes of individual branches of Soviet industry. Particularly active in this area is Professor D. Warren Nutter of the University of Virginia. His report at the 69th annual session of the American Economic Association in Cleveland in December 1956 was called "Soviet Economic Developments — Some Observations on Soviet Industrial Growth."(40)

Particular agitation was aroused in the organs of American monopolies by a report delivered by Professor Nutter at the end of 1957 at a session devoted to "Measuring Soviet Industrial Production." The magazine "Business Week" (1/4/1958) characterized his presentation as follows: "A withering analysis of one of the most highly prized Soviet propaganda weapons: their claim that the allegedly fantastic Soviet rate of industrial growth has never in history been matched by an economy deprived of the blessing of Communism... Russian industrial growth has proceeded at about the same pace as US growth, both in the 50 years before World War I, and in the 40 years since the Russian Revolution."

We will attempt to examine the reliability and scientific foundation of these alluring statements. Professor Nutter evidently did not consider that Soviet economists would be able to compare his statements with official statistical data for the USA. We have before us the volume "Historical Statistics of the United States, 1789-1945" (a supplement to the Statistical Abstract of the United States) issued by the Bureau of the Census of the USA in Washington in 1949(41), and statistical abstracts of this Bureau for later years. "The development of Soviet industry," declares Professor Nutter, "is equivalent to what took place in the USA in the four decades bracketing the 20th century." In the table on p. 179 of "Historical Statistics of the United States, 1789-1945," we find indices of the physical volume of production beginning with 1863. For the 37 year period preceding the 20th century (1863-1900) the geometric average rate of growth was 5.8% per year.

The Joint Economic Committee of the Senate and Congress of the USA in the report referred to earlier presents an annual rate of growth for 1867-1907 of 5.2%. The rate of industrial growth of the Soviet Union for the 40 years of Soviet power was 10% per year, for the period 1928-1957 it was 11.8% per year. Thus, falsehood no. 1 of Professor W. Nutter is cleared up.

Further, Nutter states that "Industrial development in the Soviet era, unadjusted for population, is similar to, though slower than, our own during the period 1880-1920." In the same table in "Historical Statistics of the United States, 1789-1945," we find an increase in industry of the USA for this period of 417.4% or an average annual rate of growth of 4.2%. This means that in reality the rate of industrial growth of the USSR during 40 years was 2.4 times the rate of growth of American industry. Even the deliberately reduced rates of industrial growth for the USSR accepted by the Joint Economic Committee are almost twice as high. Thus, falsehood no. 2 of Professor Nutter is cleared up.

The professor's statement that Soviet industry grew at the same rate as US growth during the 50 years preceding the first world war and in the 40 years since the Russian Revolution is also refuted by figures presented in "Historical Statistics of the United States, 1789-1945." According to this data the physical volume of industrial production of the USA during the period 1864-1914, that is, during 50 years, increased 11.7 times which is equal to an annual rate of growth of 5.1%. It should be noted that this was the period of the most rapid expansion of industry in the USA. During these years the USA knew neither war or destruction. At the same time there was a systematic inflow of capital and numerous immigrants from the Old World.(42)

In another place in his report, Nutter is forced to make an admission which is not at all in favor of his earlier statements: "We have been looking," he stated, "from a few restricted points of view, at the record of industrial achievement posted by the Soviet Union over the entire period of its existence. The years under review include the two world wars, a violent revolution, and a severe civil war — altogether some eleven years of turbulence, a fourth of the period. At a minimum," noted Nutter, "account must be taken of the best years of growth, which come down essentially to the periods 1928-1937 and 1948-1955" (p. 628).

Why then did not Professor Nutter, having the statistical publications of the Central Statistical Administration of the USSR at his disposal, decide himself to take account of this "minimum" and present data on the growth of Soviet industry for these years?

To "lighten" this task we present the appropriate figures referring to all Soviet industry. The index of Soviet industrial production in 1928 was 132 and in 1937 it was 588, that is, it increased by 345% in nine years which was an annual rate of growth of 18%; the index for 1948 was 1003 and for 1955 it was 2729, that is, an increase of 172% in seven years which was an annual rate of growth of 15.3%; the annual rate of growth for the 16 year period was 16.9%.(43)

For the USA for the 40 year period 1917-1957 we find in "Historical Statistics of the United States, 1789-1945," an index of 257 for 1917 and 376 for 1937, that is, an increase of 46.3%; in "The Handbook of Basic Economic Statistics,"(44) the indices of the Federal Reserve Board for 1937 and 1957 are 60 and 144, that is, an increase of 140%. Multiplying these indices we derive an increase of 251.1% over the 40 year period, or an average annual rate of growth of 3.1%. The Central Statistical Administration of the USSR in "Achievements of Soviet Power in 40 Years in Facts and Figures," presents an index of average annual growth of industrial production for the USA for 40 years equal to 3.2% (p. 19). Thus, for USA industry for the 50 years preceding the First World War the average annual rate of growth of industrial production was 5.1% and for the 40 years after the Great October Socialist Revolution it was 3.1%-3.2%, while for Soviet industry it was 10% for the 40 year period and 16.2% during the years of peaceful socialist construction. Thus, falsehood no. 3 of Professor Nutter is cleared up.

However, let us follow Nutter's reasoning further. He writes: "Few economists who have studied American industrial growth find adequate evidence of a significant and steady retardation in the rate of industrial growth. If such over-all retardation has not taken place and if Soviet industry has not grown faster than our own grew from 1880 through 1920, it would then seem reasonable to suppose that it has not grown faster than ours over a more recent period — say, the last 40 years, or the Soviet era itself" (p. 625).

There is an internal logic in this reasoning but in order for it to correspond to reality it is necessary that its assumptions be correct.

An over-all retardation in the rates of growth of industry in the USA has not occurred, writes Professor Nutter. Is this statement well-grounded? It is known that the index for 1863 was equal to 7.5 and that for 1880 was 27. Therefore, the index for 1863-1880 was 360, or an annual rate of growth of 7.8%. For the period 1880-1920 the annual rate of growth was equal to 4.2% and for 1920-1956 it was 3.7%. (Also, 1880, 1920, and 1956 were the years of maximum output of industrial production in the periods 1863-1880, 1880-1920, and 1920-1956, respectively.) The retardation, as we see, is "significant and steady."

The rates of growth of American industry in the period 1880-1920, as we have already proved on the basis of official American figures, were much below the rates of growth of Soviet industry. Thus falsehood no. 4 is cleared up.

But Professor Nutter does not restrain himself. He declares that "growth from the same levels of production was slower in Soviet industry than in American."

Let us test this statement with facts. We will turn to official data from American statistics.

We have chosen a base year, the first year when the level of industrial output of the USA was equal to the corresponding level of industrial output of the USSR in 1928 and 1947. Then, the first year when USA industry reached a level corresponding to the level of production of the USSR in 1940 and 1957 was chosen. Comparing production in the two extreme years gives, for the USA, an increase approximately equal to the increase in USSR production from 1928 to 1957. We have derived the average annual rate of growth for the USSR for a period of 29 calendar years and for 22 years, that is, excluding the five war years and two years of post-war restoration.

The increase in production from the 1928 level which Soviet industry achieved in the 12 pre-war years required the following for USA industry: for steel — 12 years, electric power — 15 years, rolled metal — 16 years, cast iron — 20 years, coal and iron ore — 21 years, potash and phosphate fertilizers — 27 years. Only in oil was the increase in the USA more rapid (an annual rate of growth of 9.8% while in the USSR it was 8.6%).

The increase in production from the 1947 level achieved by Soviet industry in the 10 post-war years required the following for USA industry: for oil — 13 years, coal — 15 years, pig iron — 18 years, electric power — 21 years, steel — 24 years, rolled metal — 30 years and fertilizers — 39 years.

Finally, the total absolute increase in production achieved by Soviet industry in 29 years (1928-1957) and actually (excluding five war years and two years of restoration)(45) in 22 years (and approximately from the same absolute level) required the following for American industry: for steel — 35 years, pig iron — 36 years, electric power — 39 years, coal — 41 years, rolled metal — 44 years, iron ore — 61 years and for potash and phosphate fertilizers — 65 years. Again, only in oil the increase equal to the growth of oil production in the USSR was achieved in three years less. For the whole period 1928-1957 the average annual rate of growth (the geo-

metric mean) of production in the USSR for 29 years and 22 years (that is, excluding seven years of war and post-war restoration, 1941-1947) was: for pig iron — 8.7% and 11.6%, steel — 8.9% and 11.9%, rolled metal — 8.8% and 11.9%, iron ore — 9.4% and 12.7%, coal — 9.2% and 12.4%, oil — 7.6% and 10.3%, electric power — 13.7% and 18.5% and for fertilizers — 15.8% and 22%. In the USA the average annual rate of growth of production with the same absolute increases in the volume of output from the same absolute level of production was: for pig iron — 6.7%, steel — 7.5%, rolled metal — 6%, iron ore — 3.9%, coal — 6.1%, electric power — 9.6% and for fertilizers — 5.4%. Thus, falsehood no. 5 of Professor Nutter is destroyed.

It must be said that the Joint Economic Committee of the Senate and Congress of the USA also undertook an attempt to compare the increases and rates of growth of industrial production in the USA and the USSR starting from approximately the level of output reached by the USSR in 1928 and 1950 (p. 37). The Committee came to the conclusion that the rates of growth of output in the USSR were higher than those of the USA and that the USA required more years for comparable increases in production.

"The lag of Soviet industry behind American industry in total output has increased," Professor Nutter broadcasts. This declaration of Professor Nutter is based on the method he uses to measure the lag, in years, of USSR output of given products behind that of the USA. If, for example, the situation for 1955 is determined, the measure of lag is taken as the number of years that were required for American industry to increase the output of the given product from the level of USSR production in 1955 to the USA production level in 1955. If, for example, steel production in the USSR in 1957 was 51 million tons and the comparable level was reached in the USA in 1928 (52.4 million tons), according to Professor Nutter this means that the USSR lags 29 years behind the USA in steel production.

This method fully satisfies Professor Nutter and with great relish he presents his "revelations," particularly the comparisons of steel production in the USSR and the USA. In 1913 Russia actually produced 4.2 million tons of steel. The USA reached this level, according to Professor Nutter, in 1892 (this is inaccurate since already in 1890 steel production in the USA was 4.3 million tons).(46) In 1955 steel production in the USSR was 45.3 million tons. Thus, the professor says triumphantly, the lag of the USSR in steel production grew from 21 years in 1913 to 29 years in 1955 (this level of steel production was reached by the USA, according to Nutter, in 1926). "Thus," writes W. Nutter, "it has taken the Soviet Union 42 years (1913-1955) to accomplish what the United States had done in 34 years."(47) Nutter comes to the same conclusions in regard to coal: the lag was 45 years in 1913 and 47 years in 1955 and so on.

Let us establish whether matters stand this way and whether the method invented by Professor Nutter is of any value.

First of all it is necessary to determine whether the USSR really required 42 years to increase steel production from 4.2 million to 45.3 million tons. It is known that from 1914 to 1917 and from 1918 to 1921 there were wars on Russian territory and the level of steel production in 1913 was restored only in 1928 (in the USA from 1913 to 1928 steel production grew by 65%). Therefore, the growth of steel production achieved by the USA in 34 years was accomplished by the USSR not in 42 years but in 27 years (1928-1955), Here, quantity is transformed into quality. Did the USSR solve the given task eight years more slowly than the USA or seven years more quickly?

Besides this we must also consider the five years of the Second World War and for metallurgy the three years of restoration (steel production in the USSR in 1940 was 18.3 million tons, in 1945 it was 12.3 million tons and only in 1948 did it reach the pre-war level). In the USA steel production increased by 32% from 1940 to 1948. Taking these eight years into account the growth of steel production achieved by the USA in 34 years was accomplished by Soviet metallurgy in 19 years. This basically changes the conclusions which W. Nutter was in a hurry to make.

But this is not the main thing. The very method proposed by W. Nutter is discredited from a scientific standpoint. In effect, this methodology would be valid if the curve of industrial production of the USSR would be the same as that of the USA.

It is known that in the USSR there is occurring an uninterrupted growth of industrial production. Our industry does not have the depressions and crises peculiar to American industry. In the USA during the 57 years of the 20th century the production of steel increased during only 26 years, that is, it exceeded the already attained level. In 31 years there was either a decline in production or a previously attained level was restored. According to the logic of Professor Nutter, the slower that a branch of industry develops in the USA the greater the number of years which the corresponding branch in the USSR lags behind it. If the USA, let us assume, increased its steel production from 4 to 31 million tons not in 21 years (from 1892 to 1913) but in 31 years (that is, production was 4 million tons not in 1892 but in 1882) then, according to Nutter, the "lag" of the USSR would be not 21, but 31 years. But is it really necessary to come to this conclusion, which arises inevitably from Professor Nutter's method, in order to see with one's own eyes its absurdity. Statistical data led the professor in the same direction. For example, for a number of reasons the USA coal industry hardly grew between 1908 and 1955 while the Soviet coal industry developed rapidly. According to Nutter's methodology the USSR in 1955 lagged behind the USA in coal production by 47 years. Meanwhile, in two years when USSR coal production was 463 million tons the USSR exceeded the level of USA coal production in 1955 (442 million tons) and reached the 1957 level of coal production (466 million tons).

The actual state of affairs can also be illustrated by the following examples. USSR steel production in 1957 was 51 million tons and in the USA it was 102.2 million tons; the USA produced 51 million tons (more exactly, 50.3 million tons) in 1923. According to Professor Nutter's method the USSR in 1957 "lagged" behind the USA in steel production by 34 years. Is this the case? It is true that the USA increased its steel production by 51.9 million tons (from 50.3 million tons to 102.2 million tons) in 34 years (from 1923 to 1957). The average annual increase constituted 2.1%, or 1.5 million tons (51.9:34). These are the American rates and increases. In order to establish in what period of time Soviet metallurgy will attain the current level of USA metallurgy, steel production in the USA in, say 1957, must be taken as a constant magnitude. It is perfectly obvious that both the lag and therefore the period in which the USSR will catch up to the USA can be validly measured on the basis of the speed with which Soviet industry, and not American, is developing.

This means that as the point of departure we must take not the American but the Soviet rates and increases. Let us take the last seven years. Soviet steel production increased from 27.3 million tons in 1950 to 51 million tons in 1957, that is by 23.7 million tons. The average annual increase was 9.3% or 3.4 million tons. Therefore if USSR steel production will increase even at this absolute magni-

tude(48) (3.4 million tons per year), then in order to reach the USA level of steel production in 1957 Soviet metallurgy will require not 34 years but approximately 15 years.

Thus, Professor Nutter's "method" is a failure.

It must be said that in order to verify the method and statements of the Professor it is sufficient to turn to his report, in particular to p. 626 of the journal. The last two columns of the table are headed "Ratio of Soviet to US Output in 1913 and 1955." Out of 31 types of major industrial products chosen by Nutter (which include 20 products of heavy industry and 11 consumer items) in 28 the relationship of USSR production to USA production increased sharply: in coal from 6% to 92%, in steel from 13% to 47%, in pig iron from 14% to 52%, in lead from 0.3% to 38%, in electric power from 7% to 30%, in cement from 11% to 47%, in sugar from 73% to 83%, in soap from 15% to 73%, in wool and worsted fabrics from 30% to 81%, in butter from 31% to 72% and so on. In only three types of products did the lag of the USSR increase: in oil from 27% to 22%, in vegetable oils from 77% to 43% and in cigarettes from 125% to 50%.

It is no accident that in the discussion of Professor Nutter's report Gregory Grossman, calling attention to the fact that "the more rapid Soviet growth is fully reflected in the last two columns of the Table," asked politely but not without sarcasm: "What, then, of the author's major conclusions?"(49) With the downfall of Professor Nutter's falsehood no. 6 we align ourselves with Grossman's question.

The Joint Economic Committee of the Senate and Congress of the USA, in characterizing the method of measuring absolute gaps in the volume of production of the USSR and the USA noted that the existence of these gaps "is not grounds for complacency, and would turn out to be a temporary phenomenon if the differential in percentage growth rates favorable to the Soviet Union were to be maintained long enough."(50)

In examining the comparative rates of growth of Soviet and American industry we have utilized for the USA the indices published by the Bureau of the Census of the USA without corrections. However an examination of the methods of American censuses and indices of physical volume show that there are abundant grounds for a critical analysis and corrections of the major industrial indices of the USA.

We have shown how the true rates of growth of Soviet industry are falsified. However, even this seems insufficient for the most zealous advocates of capitalism. In this connection the skirmish which occurred at the so-called Congress of Cultural Freedom at Milan between Colin Clark and Peter Wiles is of interest. The English bourgeois economist Colin Clark attacked American economists who, in his view, "insufficiently blacken" the successes of the Soviet Union and do not "earn" the generous funds which monopolistic organizations of the USA spend on them. "Even anti-Communist journalists," complains Clark, "find themselves affected by the widespread myth of Soviet economic successes."(51) In his second appearance, polemicising against P. Wiles, Clark stated: "Wiles sets out to defend the big American research institutes which are working on Russian economics. It is their work which I am criticizing... I am accusing most of the Americans working in this field not so much of bias as of timidity, of failure to tackle some of the most essential questions, and of exceptional amounts of labor and money wasted on comparative trivialities. Their results, in relation to the amount which has been spent on their work, have been very disappointing."

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Attempts to Deny the Superiority of Socialism

It was indicated above that the main direction of the attack on the successes of socialist industry is the denial of the significance of the fundamental advantages of the socialist system of economy as the major source of the high rates of growth of Soviet industry.

Bertrand de Jouvenel in the report cited above at the Milan gathering of the so-called Congress for Cultural Freedom stated that it is "a serious error to attribute the rapidity of economic expansion in Russia to public ownership of the means of production. It is due primarily," he stated, "to the fact that power is exercised in favor of investment...It is not because the West still has a regime of private enterprise that its development is slower than the Russian, but rather because its entrepreneurs are no longer vigorously supported by the authorities."(52)

Is it really necessary to prove how vigorously government authorities in the USA as well as in other capitalist countries support entrepreneurs? Much has been written about this not only in the Soviet but also in the American scientific literature. It is not as though the "poor" entrepreneurs of the West are deprived of the vigorous support of government authorities.

Another attempt to separate our rates of growth from the superiority of socialism was attempted by Colin Clark. He put forward three propositions: (1) the pre-war achievements of the USSR stem from the absorption by industry of surplus agricultural population; (2) it is always easier to grow from a lower base than from a higher one; (3) the post-war achievements of the USSR are explained by the restoration of the losses caused by the war (which is much easier) and not by the installation of new capacity. Let us examine these three propositions of C. Clark.

First of all it must be noted that in the pre-war years (1928-1940) the average annual rate of growth of Soviet industry was 16.8%.

During the period 1880-1920 the urban population of the USA increased from 14.1 million to 54.2 million people, or by 3.8 times(53) (in the USSR between 1928 and 1940 it increased by 2.3 times); the relative weight of the agricultural population of the USA declined from 72.8% to 48.8% (in the USSR it declined from 82.1% to 68.4% between December 1926 and 1940).(54) Besides this, 23.9 million people immigrated to the USA during these 40 years of which more than 20 million were of working age. Nevertheless the annual rate of growth of industrial production in the USA was only 4.2% for the period 1880-1920.

Thus, facts refute Clark's attempt to explain the growth of the Soviet economy in the pre-war period by the inflow into industry of labor from the agricultural population.

Insofar as his second "explanation" of the reasons for the rapid rates of growth of Soviet industry is concerned, we refer the reader to that part of our article in which we refuted a similar statement of Professor Nutter. We can also cite the fact that the current rates of growth of industry in the USSR are incomparably higher than the rates of industrial growth of the countries of Western Europe whose industrial base is considerably lower than that of the USSR and whose rates of growth are now much greater than the rates of industrial growth of the USA.

The third proposition of C. Clark amounts to saying that the post-war growth of Soviet industry is explained by the restoration of the economy after the war and not to the installation of new capacity. This is a perfectly obvious distortion of the truth.

Already by 1948 the volume of Soviet industrial production was 18% above the pre-war 1940 level. Therefore, growth in the period 1948-1957 was not related to the process of restoration. Besides, during the period 1947-1957 the annual rate of growth of Soviet industrial production was 15.9%, that is, it was incomparably higher than the Ameri-

can rates and considerably higher than the Western European rates. Insofar as the installation of new capacity is concerned, it is sufficient to glance at the handbooks of the Central Statistical Administration of the USSR in order to see that the post-war growth of Soviet industry took place with an exceptionally great increase in new productive capacity.(55)

Therefore, all three propositions of C. Clark are refuted by reality, by actual data on the growth of socialist industry.

"The reasons for the industrial progress of communism must be sought in the efficiency of communist industry," stated Peter Wiles at the discussion at Milan. It is this admission that Mr. Colin Clark and those allied with him fear.

The socialist economic system and socialist industry have passed the most severe test, the test of time. The Soviet Union, at the head of the world socialist camp, has entered the fifth decade of its existence as a mighty world power and has overtaken all countries of Europe in industrial development and is successfully catching up to the USA.

All attempts to minimize the achievements of the USSR fail in the face of facts. The fact that bourgeois economists are not squeamish about using any means and in their attempts to hide the successes of the great socialist state frequently violate the most elementary standards of scientific scruples testifies only that the apologists and defenders of capitalism are deathly afraid of the revolutionary effect of the achievements of the Soviet Union.

FOOTNOTES

(1) "Soviet Economic Growth: A Comparison with the United States. A Study Prepared for the Subcommittee on Foreign Economic Policy of the Joint Economic Committee," Washington 1957, p. VIII.
(2) "The Soviet Economy," a Discussion, Published for the Congress for Cultural Freedom by Martin Secker and Warburg, Ltd. London 1956, pp. 33-34.
(3) These figures are much too low. The actual rates are: for 1928-1940, 16.8% per year and for 1949-1954, 15.1% (see "The National Economy of the USSR in 1956," Statistical Annual. State Statistical Publishing House, 1957, p. 52 and 53). Here as elsewhere the average annual rates from the published indexes as geometric means for the period in question.
(4) "Foreign Affairs, An American Quarterly Review," January 1957, Vol. 35, No. 2, p. 270.
(5) "The Soviet Economy," p. 10.
(6) See "Achievements of Soviet Power in 40 years in Facts and Figures," Statistical Abstract, State Statistical Publishing House, 1957, p. 19.
(7) "The Soviet Economy," p. 55.
(8) "Metal Statistics," Published by American Metal Market, 1956, p. 115.
(9) "The Handbook of Basic Economic Statistics," XI/15/1957, p. 73.
(10) "Metal Statistics," Published by American Metal Market, 1956, p. 115.
(11) "Historical Statistics of the United States 1789-1945," Washington 1949, p. 179.
(12) The index for 1955 is derived by the link method; up to 1939 the index of the NBER (1939 = 374) is used and from 1939 the index of the Federal Reserve Board: 1939 = 57, 1955 = 140 ("The Handbook of Basic Economic Statistics," I/15/1958). (140 x 100)/57 = 246; 1955 = (374 x 246)/100 = 920.
(13) See "Industry of the USSR," Statistical Abstract, State Statistical Publishing House, 1957, p. 106.
(14) Ibid.
(15) Ibid., p. 32
(16) Ibid., pp. 40-43.
(17) "The Soviet Economy," p. 56.
(18) See "Industry of the USSR," p. 25.
(19) Donald Hodgman, "Soviet Industrial Production, 1928-1951," Cambridge 1954.
(20) It should be noted that the method of calculating net output widely used in the USA to establish changes in the volume of industrial production is scientifically unsatisfactory since it excludes all of previous labor and gives a distorted picture of the structure and dynamics of growth of individual branches of industry. The method of calculating gross output used in Soviet statistics is scientific. A detailed examination of these questions is outside the limits of our article.
(21) Donald Hodgman, "Soviet Industrial Production, 1928-1951," p. 54.
(22) See "Industry of the USSR," p. 10.
(23) See "Industry of the USSR," p. 214.
(24) Ibid., p. 10.
(25) Ibid., pp. 194, 192.
(26) Ibid., p. 10.
(27) Ibid., p. 31.
(28) Ibid., pp. 10, 203.
(29) The index for 1928-1950 is 3084 (ibid., p. 10). The indices for 1950 and 1951 (in % of 1940) are 183 and 227 (ibid., p. 35), that is, an increase of then the index for 1950, 3084, is increased by 24%.
(30) The index for nonferrous metals for 1937-1951 is estimated roughly from the dynamics of ferrous metals output for 1937-1951 and the dynamics of output for all group "A" products (production of means of production) for 1937-1940.
(31) Donald Hodgman, "Soviet Industrial Production, 1928-1951," p. 134.
(32) Ibid., p. 89.
(33) The index for 1950 is 2060 and that for 1953 is 3045 (See "Industry of the USSR," p. 31).
(34) "Soviet Economic Growth: A Comparison with the United States," p. 24.
(35) The index 2065 (the actual index for all Soviet industry for 1928-1955 is not 2065 by 2069 according to "Industry of the USSR," p. 32) is adjusted for changes in Soviet territory to 1896 and rounded to 1900. (Note of Joint Economic Committee of the Senate and Congress of the USA).
(36) Based on Hodgman's index and extrapolations to later years from Soviet data. The index refers only to large scale industry; the base year is not 1928 but 1927/28; territorial changes are not taken into account. (Note of Joint Economic Committee of the Senate and Congress of the USA).
(37) It should be emphasized that the development of small scale industry is fully expressed in the Soviet index of changes in the output of all industry. In recent years in this regard all necessary corrections have been introduced. While in the handbook of the Central Statistical Administration of the USSR, "Socialist Construction of the USSR," published in 1936 the output of shoes is given for 1928 as 29,-588,000 pairs (p. 206), in its handbook, "Industry of the USSR," published in 1957 the output of leather shoes in all industry in 1928 is shown as 58 million pairs (p. 351). A comparison of the indices for all industry and for large scale industry also testifies to this. The index of the volume of industrial production (1955 in % of 1928) was 2069 for all Soviet industry (see "Industry of the USSR," p. 32) while for Soviet large scale industry it was 2576 (the index for 1928 was 152 and for 1955 it was 3915. ibid., p. 31). Therefore, changes in the output of small scale industry have been correctly expressed in the Soviet indices of industrial production.

(38) "Soviet Economic Growth: A Comparision with the United States," p. 26.
(39) Ibid., p. 38.
(40) Professor W. Nutter's report was published in the "American Economic Review," No. 2, Vol. XLVII, May 1957.
(41) "Historical Statistics of the United States 1789-1945. A Supplement to the Statistical Abstract of the United States," Washington, 1949.
(42) According to data from "Historical Statistics of the United States, 1789-1945," immigration to the USA totaled 26.4 million people during 1865-1914 (pp. 33-34), and foreign capital investment in the USA grew from 1.5 billion dollars in 1869 to 7.2 billion dollars on June 30, 1914 (p. 242). The population of the USA almost tripled from 34.9 million in 1864 to 99.1 million in 1914 (p. 26).
(43) See "Industry of the USSR," p. 31.
(44) "The Handbook of Basic Economic Statistics," 1/15/1958, p. 73.
(45) Seven years of war and restoration is the approximate period which is based on the indices on the total volume of industrial production of the USSR: 1940 — 852, 1945 — 782, 1946 — 652, 1947 — 795. For some branches and regions of the USSR the period was more prolonged. The production of cast iron in the USSR in 1948 was 8% below the 1940 level, the production of steel just reached the pre-war level (it was 102% of the 1940 level), oil production was 6% below the 1940 level. The production of cement in 1947 was 17% lower than in 1940. Thus, the seven years which we exclude for the period of war and restoration is undoubtedly a minimum period.
(46) "Metal Statistics," 1956, p. 115.
(47) "American Economic Review," Vol. XLVII, May 1957, p. 620.
(48) Meanwhile it is known that the absolute amount of growth of production in the USSR increases with each five year period. Thus, steel production increased from 1935 to 1940 by 5.7 million tons, from 1945 to 1950 by 15 million tons, from 1950 to 1955 by 18 million tons and so on.
(49) "American Economic Review," Vol. XLVII, May 1957, p. 645.
(50) "Soviet Economic Growth: A Comparison with the United States," p. 141.
(51) "The Soviet Economy," pp. 9, 46.
(52) Ibid., pp. 66, 72.
(53) "Historical Statistics of the United States, 1789-1945," p. 25
(54) See "National Economy of the USSR in 1956," p. 17.
(55) The installed capacity of electric power stations increased from 11.2 million kw. in 1940 and 12.3 million kw. in 1946 to 42.8 million kw. in 1956; the supply of metal cutting machine tools increased from 710 thousand at the end of 1940 to 1,840 thousand on January 1, 1957 (See "National Economy of the USSR in 1956," pp. 58-77). All blast furnaces with a volume of more than 1300 cubic meters were built after 1941 and their volume in 1956 comprised 26.5% of the volume of all blast furnaces of the USSR (see "Industry of the USSR," p. 121) and so on.

V. Shamberg:

When Wishes Are Accepted As Reality...

(Concerning an evaluation of the reconstruction of the management of socialist industry.)

The strengthening of economic management being carried on in the USSR and a number of other socialist countries has evoked the commentaries of bourgeois politicians, scientists and journalists. The so-called "German Society for Eastern European Studies" — an organization specializing in studies of the economics, politics and culture of the socialist countries and which publishes tendentious "investigations" concerning these problems, also did not stand aloof. In October, 1957 at the annual session of the society an extensive report on this subject was presented by E. Galperin.* Its basic idea was to show that at present in the countries of Eastern Europe a struggle is going on between the "total planned economy" and the "market economy" and that there a transition from the first to the second is taking place.

The author of the paper declares that the planned economy is "bankrupt," in his opinion, it cannot satisfy the demands of consumers. E. Galperin considers that a "planned economy is capable of achieving outstanding success only in some special branches." (p. 892).

A socialist, planned economy, actually, can concentrate the efforts of the entire society for solving its central tasks. This is one of the greatest advantages of the socialist system over the capitalist economy. A planned economy makes it possible to solve the most complicated production problems rapidly and with clearness of purpose. Such problems are, for instance, the construction of gigantic hydroelectric stations, the harnessing of tens of millions of hectares of virgin lands and housing on an exceptionally large scale. The advanced character of the socialist system is revealed in a particularly convincing manner by the remarkable achievements of Soviet science and technology — in creating the first atomic electric station and the intercontinental rocket, and launching the first artificial satellites. Only a highly developed socialist, planned economy can solve such outstanding tasks. All this, in the end, is directed to satisfying the growing needs of the workers.

The successes in developing the national economy of all socialist countries prove the advantages of the planned socialist system.

But Galperin does not want to admit this. In his paper it is noted that in Czechoslovakia the planned economy functions much better than in any other socialist country. Galperin explains this by saying "because of the conscientiousness and efficiency of the Czech workers, it is difficult to imagine any economic system which would be unfit for Czechoslovakia." (p. 894).

Let us check the assertions of the Professor.

Let us examine the dynamics of industrial production in Czechoslovakia for 30 years — from 1925 to 1955. For five years — from 1925 to 1929 — production increased by 32%; then during the period 1929-1933 it declined by 40%. During 1933-1937 it rose again somewhat, but did not reach the 1929 level. Only after the advent to power of the people did the tempo of production growth in Czechoslovakia become high and stable. By 1955 industrial production increased almost 2.3 times compared with 1929, in spite of the destruction during the war. In some branches of economy (machine-building, energetics, the chemical industry and metallurgy) the increase was even more impressive.* It is quite obvious that the matter is not simply the efficiency and high qualifications of the Czechoslovakian workers and specialists (this raises no doubts), but, and this is the main thing — that only the planned socialist economy creates all the possibilities for the all-sided and rapid development of production.

The same is observed in all the other countries of the socialist camp. In Poland, for instance, the production of industrial products increased almost 5.9 times by 1957, if compared with the pre-war level; in Hungary — 4 times, in Bulgaria — more than 7.3 times, etc.

The rapid and steady development of the economy in all people's democracies is the result of the functioning of the new, socialist planned system of economy.

The all-round development of the national economy in the socialist countries is carried on in the interests of the consumers — i.e. the toiling masses. The aspiration for meeting the growing demands of the toilers, to constantly increase the output of consumers goods, to enlarge the assortment and improve its quality, is the determining direction of development of the socialist economy. It is exactly socialism which called forth the methods, inherent only in it, of the planned influence of the growing consumption of the broad masses on the basis of extended production. The results achieved by a planned economy in this field are quite obvious.

Declaring that a planned economy is "ineffective," Galperin does not analyze the figures and does not produce examples, he only contrasts, without proof, the "new market economy" with the planned economy. Only the transition from a planned economy to a market economy, declares Galperin, can satisfy the demands of consumers. Speaking of the "market economy," he has in mind "not some abstract system, which does not exist at all, but a market economy, limited by state control and definite bounds, such an economy which we created in different variants in our countries of the West." (p. 893). But, what is this "new market economy?"

Juggling with the terms "market economy" and "planned economy," shows that Mr. Galperin approaches the processes taking place in socialist countries from the positions of the economic theories of the neo-liberals fashionable at present in the FRG. In their "investigations" the neo-liberals substitute the analysis of actual economic relations, based on a definite form of ownership of the means of production, by a discourse on two abstract types of economic organization of society: planned and market economy. The

* "Ost Europa," No. 12, 1957.

* See "Ten Years of Development of the National Economy and Culture of the Republic of Czechoslovakia" (1945-1955), 1957, p. 10.

neo-liberals contrast the planned economy to the market economy in order to "substantiate" the "bankruptcy" of the first and the non-existing advantages of the second. The division of the economy of all times and all nations on the basis of a "planned" and "market economy" is needed by the neo-liberals in order to conceal, to cover up the profound social contradictions of contemporary capitalism and to drown the advantages of socialism in pseudo-scientific reasoning.

The neo-liberals propagandize the so-called "social market economy." This hazy term was invented at one time by Muller-Armak, who declared that the market economy must serve as a skeleton for the future economic order, but it should not be a liberal market economy, allowed to drift, but a market economy properly and socially directed. The expression "social market economy," which does not mean anything, was attached by the neo-liberals to the economy of the Federal Republic of Germany. But this is a most genuine capitalist economy, and its character in no way can be changed by intervention of the state in economic life, for the state itself is in the hands of the largest monopolies and operates in their interests.

One of the central points in the "theories" of the neo-liberals is the comparison of the two opposite world systems and defense of the capitalist system of economy. It is characteristic that when fascism was at the helm in Germany, neo-liberals appeared in the press with numerous articles against socialism. In the onslaught on socialism an active part was taken by Walter Eucken, who is considered as the founder of this theory, and other theoreticians of neo-liberalism: Repke, Boem, Miksh. Repke asserted that the neo-liberal "doctrine of the impossibility of rational operation without state support under socialism constitutes the strongest criticism socialism ever experienced." The criticism of socialism by the neo-liberals has a slanderous character. Thus, for instance, Walter Eucken in his book "Foundations of Economic Policy" wrote: "all decisions, leading toward creation of state-ownership and centralized management, decrease the stimulus of productivity, complicate the calculation of the cost of production and make unavoidable the bureaucratization of economic management."*

Contrasting the so-called "social market economy" to a planned economy, the neo-liberals assert that supposedly they have found a method of directing the economy, by which one can win in the economic competition with socialism. But the real results of economic development of socialist and capitalist countries clearly show that in the economic competition with capitalism socialism is winning.

The deliberately foggy formulations of Galperin screen a very definite political content. By "market economy" he means "capitalism." He wants socialist countries to return to capitalism. Camouflaging the essence of the matter, he avoids the very word "capitalism." But, if one calls capitalism "market economy" or "social market economy," capitalism does not cease to be capitalism.

Characterizing the essence of a "market economy," Galperin indicates that the present reconstruction of industrial management in socialist countries is nothing else but a movement toward his beloved market economy.

But he sees what he wants to see.

The actual changes in the forms of economic management in the socialist countries have nothing in common with the movement toward a market economy, with rejection of the social ownership of the means of production and with centralized planning.

* Walter Eucken, "Grundsatze der Wirthshaftspolitik," S. 135.

In the USSR the transition to the management of industry and construction on the territorial principle permitted a considerable simplification of the system of state direction of the national economy making it possible to apply more consistently Lenin's principle of democratic centralism in building the economy and to free the initiative of all. The economic councils, having concentrated in their hands different branches of industry in the economic-administrative regions, can realize the complex development of the regional economy and direct the enterprises with complete knowledge of local needs and possibilities and utilize most expediently all the resources and production capacities in the interests of fulfillment of the state plan. It is important to stress that the transition to industrial and construction management on the territorial principle means not weakening, but, just the contrary, strengthening planning. The State Planning Committee (GOSPLAN) of the USSR, freed from all-sided and sometimes too detailed regulation of the activity of enterprises, now is concentrating its attention on the basic problems concerning the development of economy. The GOSPLAN of the USSR conducts a unified, centralized policy for the development of the most important branches of economy, secures the proper distribution of the production forces of the country and the proportional development of the entire national economy. This system makes it possible to combine more rationally centralized planning with the initiative and independent action of enterprises, local organs and broad masses of workers and makes the management of production even more democratic. All this creates the conditions for a more rapid development of the socialist economy.

The improvement of industrial and construction management has nothing in common with a transition to a market economy in the people's democracies either.

For instance, in Czechoslovakia, the new system of industrial and construction management was introduced on April 1, 1958. Two forms of industrial economic units have been established which are under the direct management of the ministries. The first form is an industrial combine which includes a definite branch of production or component part. For this purpose the existing enterprises are consolidated into larger complex enterprises. The main body of such consolidated enterprises is a factory or plant at which the largest part of the production is concentrated, capable of securing the progressive technical development of all the plants (or factories) cooperating with it on the basis of a unified plan. Another form of production association is the federation, which is formed in cases when one or another branch of production is excessively dispersed. Such federations are formed first of all in the food industry and in construction.

The industrial enterprise units are responsible for ensuring the economy with a complete and steady supply of products of the given branch within the limits of the established plan of production. All enterprises are obliged to keep production on a high technical and technological level, indefatigably improve the organization of labor and production, take care of raising the qualifications of workers and to utilize, as much as possible, the capacities of production.

In order to fulfill these tasks the units of industrial enterprises are authorized to determine the volume and structure of production, in accordance with their state plan work quota and the needs of the national economy. They are authorized to develop their production-base, to dispose of their product and ensure technical progress. The centers of such units are located preferably in the regions where the given branch of industry is most highly developed.

With the extension of the rights of enterprises the role of

ministries changed. The latter decide only the basic problems of development of individual branches of production. But this does not minimize the responsibility of ministries towards the enterprises within their jurisdiction, does not relax their control and their leading role.

The sequence of planning the national economy is also changing. First of all the role of long-range planning, the task of which is to determine the principal lines of development of the national economy for 10 to 15 years, is growing. On the basis of the long-range plan, the plans are worked out, determining the basic proportions of development of the national economy, the main tasks of individual branches, the principal direction of capital construction and of domestic and foreign trade. On this basis the enterprises stabilize their programs of production, work out their plans of development and conclude long term economic agreements.

The reconstruction of industrial and construction management in the German Democratic Republic was carried out somewhat differently from Czechoslovakia. Most industrial ministries there were abolished. In their place were formed enterprises associations along the lines of industrial branches (for instance, "enterprise association of the brown coal industry" etc.). These associations are state organs for directing the people's enterprises within the jurisdiction of the center. As a rule, they are located in the main centers of corresponding branches of industry. A considerable number of enterprises were transferred to the regional councils. The new factor in the management of branches of industry is that with the abolition of ministries the enterprises received more independence. As a result of forming enterprise associations and transferring a number of enterprises and branches to the regional councils, the management was brought closer to production.

The State Planning Commission is responsible for the proportional development of the national economy, and for the complex and rational coordination of the most important tasks of the national economy.

The abolition of industrial ministries and the placing of basic responsibility for planning and control in the State Planning Commission guarantees united guidance. The working out of the national economic plan will be effected on the basis of the proposals of enterprises, unions of enterprises and regional economic councils. The regional economic councils now must work out the plan for economy of the region guaranteeing better utilization of reserves and strengthening of control over the fulfillment of the plan.

The most characteristic feature of the contemporary system of people's Poland is the combination of centralized planning with local initiative, granting broad rights to enterprises within the limits of directives established in a centralized manner. Only the basic proportions of the plan for the national economy are centrally determined. The changes in the system of centralized planning followed the line of decreasing the number of directives. Now only the production of basic commodities is planned in the center, while the detailed assortment is established by the enterprise itself. The number of workers and employees and the wages are not planned in a centralized manner. The total wage fund, the prices and size of accumulation became the basic objects of centralized planning. It is well-known that the level of prices and accumulation directly determine the budget receipts. The wage fund is the basis for drawing up the plan of population income and expenditures and is directly bound with the plan for raising the workers' standard of life.

The leading statesmen of the Polish People's Republic underline in their speeches the necessity of strengthening planned management. Thus, Comrade Gomulka in his report at the ninth plenary session of the Central Committee of the Polish Workers' Party, speaking about the necessary conditions for building socialism in all countries, named as one of them "inclusion of the entire national economy in the framework of central planning and management."

Thus, facts show that the reconstruction of management of the national economy in the socialist countries represents perfecting the system of state planned guidance of the economy, and not a transition from a planned to a market economy.

As we see, Galperin wants the socialist economy to degenerate into a capitalist economy. But these hopes are utterly groundless. The reconstruction of industrial management strengthens the socialist planned system of economy.

It is characteristic that the theoretical and practical bankruptcy of Galperin's reasoning was noted at the same session of the "German Society for Eastern European Studies." Professor Karl Talheim opposed Galperin's thesis that a "market economy" does not necessarily presuppose private ownership, thereby discarding the mask from his pseudo-scientific constructions. The groundlessness and complete isolation from life of Galperin's assertions were indicated by one of the most important German specialists on Soviet economics, Doctor Otto Schiller, who studied the Soviet economic system many years, being in Moscow as an attache at the German Embassy. Thus, even bourgeois economists, and the economists who could not be suspected of sympathies to the socialist system, who, just the contrary, see in it "a menace" to the existence of capitalism, criticized the reasoning of E. Galperin.

The advance of socialist economic management is a natural and regular process in the development of socialist society, determined by the growth of the productive forces. Comrade N. S. Khrushchev said in his report at the first session of the Supreme Soviet of the USSR: "Lenin teaches us that with the advance toward communism we must manage our economy on a more and more democratic basis." But this process has nothing in common, and never will, with the transition to a capitalist "market economy."

N. Karotamm:

The Economic Effectiveness of Capital Investment in Socialist Agriculture

The reorganization of industrial construction management, as well as the reorganization of the MTS and the sale of machines to the collective farms, are measures of great importance which will result in a significant increase in the rate of expanded reproduction for the USSR's whole national economy. They signify a considerable increase in economic effectiveness of the means which the state and the collective farms have invested in the USSR's socialist economy. A maximal increase of economic effectiveness in the use of socialist funds is an important problem for the whole economic sphere. In connection with this the need is being acutely felt to find a method by which the effectiveness of the means invested by the state and the collective farms in the economy can be determined, a method which would be scientifically sound, precise and easy to apply in practice.

So far as the national economy is a unit and has a single process of expanded reproduction, the criterion of effectiveness must be the same for all branches of the socialist national economy, including agriculture. Let us consider first some general questions concerning the determination of the economic effectiveness of investments in the socialist national economy.

The question of how to determine the economic effectiveness of capital investments has been discussed by Soviet economists many years but its solution has not yet been found. Various groups of economists consider the criteria of economic effectiveness of capital investments, for example, the following indices: (1) the volume of the product obtained, (2) the cost of the product, (3) the value of the product, (4) labor productivity, (5) the size of the national income, (6) rentability calculated on the basis of the cost of the product, (7) the length of the period during which the investment pays for itself, (8) the volume of capital investments per unit of the product, (9) the price of the product, and others.

Capital investments are usually defined as expenditures undergone for the expansion and restoration of the basic means of production. However a product cannot be produced only with basic funds. Beside capital investment in the basic funds we also have investments the purpose of which is to expand and restore the circulating funds of a concern, of a branch of the national economy etc., as well as expenditures undergone for the payment of labor. These investments form a circulating fund. The basic fund and the circulating fund make up the aggregate fund functioning in all phases of the production cycle. In a different division of the total fund we have a fixed fund (C) and a variable fund (V). This division is of great importance for the analysis of the economic effectiveness of investments in production. The joint functioning (in the process of production) of the basic fund and the circulating fund (or of the fixed fund and the variable fund) in their indissoluble unity is necessary for the production of goods and is necessary in a quite certain, socially necessary proportion. The process of production is impossible without this.

It follows from this that the very problem of determining the economic effectiveness of capital investments (investments in basic funds) without considering their unity with the investments in circulating funds has no economic basis. In view of this we consider it necessary to give up the term "economic effectiveness of capital investments" as inexact. Instead of this term we should use the term "economic effectiveness of fund investments"(1) which would combine the two production funds.

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The purpose of socialist production is the satisfaction of the growing material and cultural needs of all members of socialist society within the limits dictated by the existing level of development of the productive forces in socialist society. This gives us the final goal for which the fund investments are made. The means for reaching this goal are the development of socialist production, the undeviating realization of expanded socialist reproduction. From this we may conclude that an investigation of the economic effectiveness of the fund investments can proceed in the proper direction only if it is based on the theory and practice of expanded reproduction in the socialist national economy. The only source of the expanded socialist reproduction is the surplus product. Hence the surplus product forms the main content of the economic effectiveness of the applied fund investments or of the total fund.

At present a part of the surplus product produced by concerns in the USSR is withdrawn by the state through the system of prices and the turnover tax and does not find a reflection in the reports of the concerns. A part of the profits produced by concern of a branch in a number of cases is realized through the product of concerns of other branches of production (for example, a part of the profit of an agricultural concern is realized through the products of the food industry or light industry). All this makes it impossible to determine the size of the surplus product created in a particular concern. In view of this the actual results of the work of each concern are not clearly seen.

The social, economic effectiveness of the fund investments within the boundaries of the whole economy can be determined now only at the center by taking into consideration the whole surplus product created in the national economy. But it exists and comes into existence through the economic effectiveness of individual concerns. Thus the struggle for raising the economic effectiveness of the fund investments in each individual socialist concern is the most important condition for raising the economic effectiveness of the basic and circulating funds in general. In view of this of the greatest importance is first of all determining the economic effectiveness of the concern's fund investments, the sole and key index of which is the rentability or the profitability of the fund investments.

In our economic literature and in our business practice rentability is usually understood as the ratio of profit to cost (to the sum of production expenses of a concern or a group of concerns etc.) Such an understanding of rentability, in our view, is not correct. Per cent of rentability, calculated on the basis of costs or expenses of a concern reflects the economic effectiveness only of the consumed portion of the total fund (that is, of the circulating fund and of that part of the basic fund which finds its expression in the sum of depreciation reserves or, using a different terminology, as a part of the fixed fund and of the whole variable fund). But the profit (or loss) is not and cannot be the

result of the functioning in production of that part of the total fund which was consumed during the given production cycle. It is the result of the functioning in the process of production of the whole sum of fund investments. In view of this, in our opinion, we should compare the sum of profits (or losses) with the whole sum of the fund investments used and not only with the costs. In such a case the per cent of rentability (or loss) will be a ratio of the profit (or loss) to the sum of applied fund investments or aggregate fund during the period of the cycle, say, for a year or some other length of time expressed as a percentage.(2) In practice when we calculate rentability on the basis of expenses of production we do not take into consideration at all, for example, a larger part of the basic fund the whole of which, however, was taking part in production and was necessary for obtaining the profit. In view of this such a method of determining rentability hardly can be considered correct.

We have to emphasize that under a planned socialist economy rentability is neither the regulator of the distribution of fund investments nor the regulator of production. In the USSR there is not and cannot be a self-directing development of the national economy or a self-directing distribution of the fund investments. Fund investments are distributed in the national economy after an examination of the real needs and possibilities of expanded socialist reproduction in a planned way, after an examination of the material balances, of the balance of labor, etc. However, other conditions being equal, the fund investments should be directed into the concerns and branches where the individual or branch rentability of production is higher. Underestimating or ignoring the principle of rentability (especially of the rentability of individual concerns) in the socialist economy is based in fact on a mistaken belief that a natural economy under socialism is a higher form of economy than an economy based on the socialist exchange of goods, on socialist commodity-money relations.

We should keep in mind that though the cost of the product cannot serve as the main index of the economic effectiveness of the fund investments, the problem of rentability cannot be solved without the use of a cost index. The rentability of a concern, a branch etc. at a given level of prices of the products depends in the first place upon the cost. In view of this the struggle for lowering the cost of the product is a decisive condition for increasing the rentability of the concern, for lowering costs and ending their being in the red.

The question of prices is very important for the problem of rentability of socialist production. The existing system of prices (including prices of agricultural products) has serious defects. The social cost of the goods and the action of the law of value under socialism are not sufficiently taken into consideration in price formation and this, in many cases, distorts the real picture of the rentability of individual concerns. Social value should be placed at the base of the prices of socialist goods, prices fixed by the state at a level helping the planned development of the national economy. Planned price formation must proceed in such a way that prices ensure expanded reproduction at the concern under socially average conditions of production. Prices in agriculture should be fixed in such a way as to ensure the possibility of expanded reproduction even in that category of concerns which work under the worst objective conditions in each given agricultural zone (on the basis of the average data for, say, four or five years) or there may be considerable differentiation of prices in each zone by groups of farms with different conditions of production.

The index of the national income also cannot serve as the main index of the economic effectiveness of fund investments. Expanded reproduction is realized through the net income (surplus product) and not through the gross income. The national income cannot be commensurated with the aggregate fund because the necessary product enters both the national income and the aggregate fund (the variable part of that fund). A clear picture of these differences may be obtained from the scheme at the top of the next page.

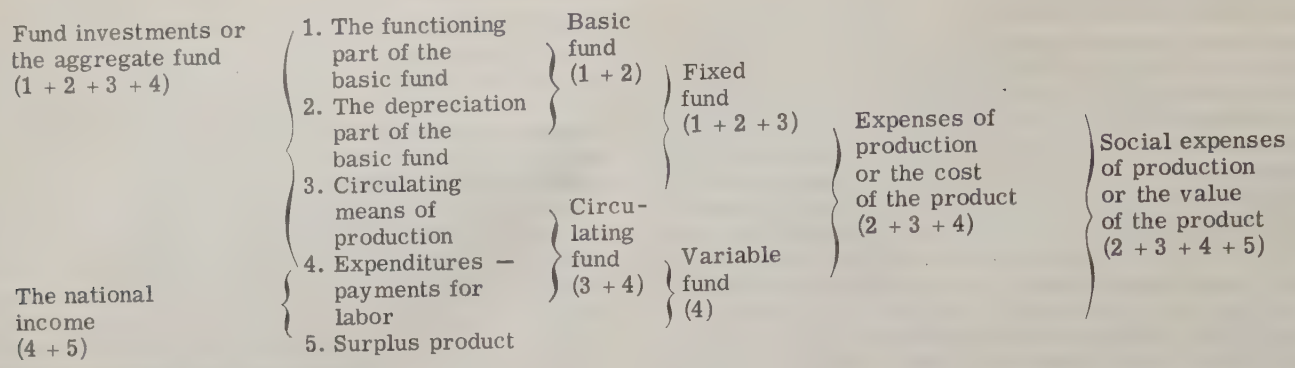
In view of this the national income is commensurate only with the fixed fund; but this commensuration essentially has no economic meaning because the fixed fund is only a material condition for obtaining the national income and not its source.

The index of labor productivity also cannot be considered as the main index of economic effectiveness of the fund investments or of the aggregate fund. In determining labor productivity we now take into consideration only present labor. If we consider it a measure of the economic effectiveness of fund investments, then in terms of value it would mean that the whole result of the production which is actually the result of application in production of the whole aggregate fund will be commensurate only with one part of the fund — its variable part. Such a method cannot be considered correct, because though the surplus product is created only by present labor in the process of production, the variable part of the aggregate fund (without its fixed part) cannot ensure the process of production and, consequently, cannot ensure obtaining the surplus product.

At the same time we should have in view that labor productivity is directly connected with the cost of the products and through it has a great influence on rentability. Thus the productivity of social labor is one of the most important factors of the fund investment's rentability.

In some cases, especially in the first stages of designing (the selection of the object for the fund investments, etc.) some additional indices may be necessary for making more precise the economic effectiveness of the fund investments and for a more comprehensive clarification of questions connected with it. Such an index is, for example, the length of the period during which the investment pays for itself. It is widely used by designing organizations. The length of the period during which the investment pays for itself is connected with rentability and is in direct proportion to it. However this index has a number of defects the main one of which is that the present conditions of production are applied to a more or less distant future without any corrections. Nevertheless in some cases this index may be very useful, for example, if in calculating the length of such a period we include the length of the construction period and the period during which this object will be in production exploitation. Other, additional or auxiliary calculations and indexes may be applied in case of necessity in order to find the answer to various specific questions concerning the economic effectivity of the fund investments and concrete conditions of individual branches of the national economy.

Consequently all main facets and moments of the economic effectiveness of the fund investments find their place in a single and decisive index of effectiveness — rentability of the aggregate fund. The cost of the product, labor productivity, prices of the products, the scale of production, the length of the period of the turnover of the fund, the quality of the product, the size of the rent (this mainly in agriculture), etc. — these are factors which determine the level of rentability but are not independent (auxiliary, supplementary, etc.) indices of economic effectiveness. The most important among these factors influencing directly and in a decisive way the level of rentability of the fund investments are the cost of the product and its price. Our main attention should now be concentrated on an analysis of these two most im-


Fund investments or the aggregate fund (1 + 2 + 3 + 4)
1. The functioning part of the basic fund
2. The depreciation part of the basic fund
3. Circulating means of production
4. Expenditures — payments for labor
5. Surplus product
The national income (4 + 5)
Basic fund (1 + 2)
Circulating fund (3 + 4)
Fixed fund (1 + 2 + 3)
Variable fund (4)
Expenses of production or the cost of the product (2 + 3 + 4)
Social expenses of production or the value of the product (2 + 3 + 4 + 5)

portant factors of rentability of socialist production.

It should be noted that the velocity of the circulating fund, which is different in different branches of the national economy, influences the economic effectiveness of the fund investments. For example, while in agriculture the circulating fund circulates once a year, in machine building it circulates several times a year. This is caused mainly by the fact that biological factors — the long period of production — play an important part in agriculture.

In our method of calculating the rentability of production the fact that during the year the circulating part of the aggregate fund may circulate many times is fully taken into consideration. In such a case the annual sum of the circulating fund is correspondingly increased, while the size of the fixed fund applied (after the deduction for depreciation) remains unchanged. The annual sum of the profit also increases. The ratio of the increased amount of profit to the increased amount of the aggregate fund (expressed as a percentage and termed percentage of rentability) gives a quite precise index of the economic effectiveness of the fund investments. Other conditions being equal, the more rapidly the basic fund circulates, the greater the economic effectiveness of the fund investments.

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The existing system of accounting and reports in agriculture makes it possible to calculate the rentability only of the state farms. The calculation of collective farm rentability on the basis of their annual reports is impossible because they do not calculate the cost of the product and their profits (or losses). The MTS reports are of the same type as those of the budget organizations but not the same type as the concerns which are financially independent. In view of this the existing form of the MTS annual reports do not make it possible to calculate the rentability of their work. In connection with the MTS reorganization, the sale of machines to the collective farms and the establishment of the RTS which will be financially independent, it is time to introduce in all our agricultural concerns a system of accounting and reports which will make it possible to calculate the rentability (or losses) from their economic activity.

The most important feature of agricultural production is the fact that land takes part in it as the main means of production. However in the USSR land is not a commodity either in form or in essence. It is neither sold nor bought and has neither value nor price. As a result, the land is not reflected in our money evaluation of the basic means of production and does not appear as a component of the basic fund. Yet, finding how this most important means of production is used from the point of view of the rentability of the concerns is of great importance for agricultural production. In view of this it appears necessary to calculate the size of profits (or losses) per unit of land area (for example, per ha or 100 ha of agricultural land, plowed land, sown area, etc.) It must be noted that this index has one serious defect: it does not consider the quality of the land and the composition of the agricultural land. However, if there is a proper land cadaster and information making it possible to bring various components of the agricultural land into one index, then the index of economic effectiveness will be more precise and correct.

As to differential rent, there is no need to determine it first for calculating the economic effectiveness of the fund investments because it is expressed in an additional product, in the lower level of the cost of the product, compared with the average social level, in additional money receipts and additional surplus product. A part of the differential rent goes to the state through the system of prices, taxes and payments in kind for the work of the MTS. The part of the differential rent which remains in the concern finds its expression in the profits of the concern and as a percentage of concern's rentability (or of a group of concerns, etc.)

The percentage of rentability, as the main and sole index of economic effectiveness of the fund investments, is of great practical importance. It is a concrete, comprehensive index of the whole economic activity of each socialist concern, group of concerns, etc. to the degree to which the results of their work are reflected in the data of their reports (that is, without the centralized net income, which they do not contain). A concrete analysis in each particular case makes it possible to find out why the percentage of rentability (or losses) is high or low. This analysis also makes it possible to find measures which are necessary in each individual case to end losses or to increase the rentability of the concern. The same may be said about an index of the profit (or loss) per unit of land area.

Of course, the planned target for the percentage of rentability must be given to a concern together with the assortment plan of the products and other indices. Also, in the analysis of the results of the work it is necessary to evaluate the realization of the plan in respect to assortment, percentage of rentability, and other planned indices of the concern's work.

In order to calculate the percentage of rentability in respect to the aggregate fund per year it is necessary to take the average annual sum of the basic fund (3) and to add it to the annual sum of the circulating fund.(4) The result of this is the annual sum of the aggregate fund or the sum of the fund investments which participated in production during the year. After that it is necessary to take from the annual reports the sum of the profit and to determine what ratio this annual sum of the net profit has to the sum of the aggregate fund used (in percentages). The resulting figure is the percentage of rentability. The percentage of losses is similarly determined.

Determination of the rentability or losses of concerns, trusts, economic regions, etc. is not complicated and requires little effort. After the reform of the accounting and

reporting system on the collective farms they should be able without difficulty to determine the per cent of rentability (or losses). In our opinion the annual reports of all industrial, agricultural, transportation, and other concerns should include for this purpose the following data: 1) the annual sum of the fund investments, including the fixed fund and the circulating fund; 2) the per cent of rentability; 3) the per cent of losses. In agricultural concerns we should add an index of profit (or loss) per ha of agricultural land.

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Let us now apply these principles and method for the determination of the economic effectiveness of the USSR state farm fund investments. Below we give the rentability data for the state farms of the former Ministry of State Farms for 1956 (for their main activity).(5)

			in terms of cost	
	% rentability	% loss	% rentability	% loss
USSR	0.2	-	0.49	-
Turkmenian SSR	9.0	-	31.6	-
Kazakh SSR	7.4	-	16.4	-
Kirgiz SSR	6.4	-	17.9	-
Georgian SSR	3.7	-	16.3	-
Azerbaidzhan SSR	3.3	-	13.5	-
Uzbek SSR	2.0	-	5.3	-
Armenian SSR	0.9	-	2.6	-
Tadzhik SSR	-	0.4	-	1.4
Ukrainian SSR	-	0.9	-	2.3
Estonian SSR	-	1.1	-	2.5
RSFSR	-	2.1	-	5.0
Byelorussian	-	3.1	-	7.0
Latvian SSR	-	3.6	-	7.5
Lithuanian SSR	-	4.0	-	9.2

The rentability of state farm production in 1956 in the first seven union republics can be explained mainly by the higher rentability of sheep raising, grain production (in the Kazakh SSR), cotton raising, production of tea, etc. The losses of the last seven union republics were caused mainly by the unprofitability of cattle breeding, hog raising and in some cases of grain production. For the country as a whole the state farms made a profit in 1956; but the level of their profitability was low. This shows great defects in their business activity and, first of all, an extremely high cost of products on the majority of the state farms. It must be also noted that the wages, expenses on seeds and feed and the overhead amounted in 1956 to almost 75% of the state farms' circulating fund. In these components of the circulating fund one can find the main sources of lowering the cost of the state farms' products. For this purpos we add also rentability calculated according to the expenses of production or cost. But even according to this method, which makes the rentability index appear higher than it is, the rentability of the state farms is low: for the whole USSR it amounted in 1956 on the average only to one-half of one per cent.

Of great importance as an index of economic effectiveness of land utilization is the size of profits, or losses, per unit of land area. In the table below we give the corresponding data for the USSR and for the union republics for the same year in rubles.

The data of this table do not fully coincide with the data of the preceding table.

In particular it is necessary to note that among the union

	Per ha of plowed land		Per ha of agricultural land	
	Profit	Loss	Profit	Loss
USSR	4.1	-	1.6	-
Turkmenian SSR	1,997.0	-	2.8	-
Georgian SSR	1,562.0	-	275.0	-
Kirgiz SSR	332.0	-	49.7	-
Azerbaidzhan SSR	181.0	-	63.7	-
Uzbek SSR	101.6	-	9.1	-
Armenian SSR	82.0	-	14.4	-
Kazakhstan SSR	7.5	-	2.6	-
Ukrainian SSR	-	26.1	-	2.1
Tadzhikistan SSR	-	37.0	-	5.5
RSFSR	-	47.6	-	26.3
Estonian SSR	-	104.2	-	53.1
Belorussian SSR	-	119.6	-	73.6
Latvian SSR	-	173.0	-	109.0
Lithuanian SSR	-	204.0	-	136.0

republics the Kazakhstan SSR moved from the second place to the seventh. This shows that the economic effectiveness of land utilization in the Kazakhstan state farms is lower than on the state farms of other union republics which brought profit in 1956.

The rentability (or losses) in the work of each state farm, group of state farms, etc. is the result of a complex interaction of a considerable number of factors. A comprehensive analysis makes it possible to reveal the causes of the level of rentability (or losses) in each particular case and to outline the necessary concrete measures needed for further strengthening the economy of a state farm, a group of state farms, etc., for ending losses, or for increasing the rentability of their production.

Let us examine data concerning one factor among the key factors of rentability — the cost of one centner of grain and products of livestock breeding on the state farms in 1956 (in rubles):

				Meat (live weight)			
	Grain	Milk	Wool	Large horned cattle	hogs	sheep	fowl
USSR	32	127	1,846	700	985	430	1,390
Turkmenia	68	93	930	637	942	244	2,111
Kazakhstan	29	157	1,806	620	1,059	362	1,481
Kirgizia	28	118	1,715	649	923	301	1,120
Georgia	50	146	1,377	1,588	1,046	408	1,554
Azerbaidzhan	29	120	1,345	885	965	251	1,950
Uzbekistan	32	150	1,029	1,059	940	383	2,134
Armenia	203	125	2,442	656	1,500	307	-
Tadzhikistan	36	156	970	640	1,051	402	1,166
Ukraine	28	103	1,882	603	764	503	1,266
Estonia	112	122	5,592	789	1,008	583	1,291
RSFSR	34	132	2,158	726	1,038	520	1,417
Belorussia	87	134	3,341	671	1,088	455	1,055
Latvia	109	127	4,266	763	1,075	555	1,283
Lithuania	116	114	-	689	1,218	402	1,561

In most cases the cost of the state farms' products is too high. This is the main reason why many state farms are in the red. At the same time the cost of state farm products varies sharply from one republic to another. On the basis of the data concerning the cost (four or five year averages) we make make quite definite conclusions about the most suitable type of specialization of the state farms in the product with the lowest cost.

Of great interest is the question of the economic effectiveness of the fund investments on state farms of different

specialization. Below we give the corresponding data for Kazakhstan for 1956:

State farm specialty	Number	% of rentability	% of losses	Per 100 ha of agricultural land in rubles	
				Profits	Losses
Grain	375	11.6	-	6,230	-
Meat-milk	71	-	1.4	-	535
Milk-vegetables	12	-	8.2	-	2,472
Sheep raising	111	0.46	-	77	-
Hog raising	9	-	4.7	-	10,321
Horse breeding	4	4.9	-	2,563	-
Production of vegetables	2	-	6.3	-	5,387
Cotton raising	3	11.3	-	8,859	-
Total	587	7.2	-	2,462	-
State farms established before 1954	243	1.03	-	290	-
New state farms established in 1954-1956 on the virgin lands	343	12.5	-	6,067	-

It can be seen from this table that the grain and cotton state farms were the most profitable in Kazakhstan in 1956, that horse breeding and sheep raising state farms were less profitable and other state farms were losing money. It is important to note also that the economic effectiveness of the fund investments on the new farms established on the virgin lands in 1956 was more than 12 times as high as on the old ones.

The main ways of increasing the economic effectiveness of the fund investments in socialist concerns and in the whole national economy is the application and strengthening of cost accounting, better utilization of the fixed and circulating funds, lowering the cost of the product, increasing labor productivity in correspondence with the conditions of various zones, increasing yields of cultures and the productivity of the livestock under conditions of rigorous economies, improvement of the system of prices and comprehensive utilization of material stimuli to make the workers of the socialist economy more interested in the further development and upsurge of the economy and in increasing the rentability of production.

The determination of the economic effectiveness of the fund investments is an important means of analyzing the position of socialist concerns, of branches of the national economy and of the whole national economy. It may render effective help in the improvement of the management and guidance of the national economy and in the working out of practical measures for the improvement of the economic activity of socialist concerns, for revealing their inner reserves and increasing the rate of expanded socialist reproduction.

The pressing needs of socialist and communist construction at the present stage demand an increase by every means of the economic effectiveness of the fund investments. In order to achieve this we should resolutely strengthen cost accounting, raise the rentability of production and increase accumulations, as well as increase the rate of expanded reproduction in each concern, in each branch of the socialist economy and in the national economy as a whole.

Among the most important and effective means for the solution of these questions are methods of measuring the economic effectiveness of the fund investments, scientifically sound and easy to apply in practice.

FOOTNOTES

(1) The fact that in the socialist economy there is not and cannot be an economic category of capital can be cited in support of this suggestion. The term "capital investments" comes from the term "capital." Attempts of some economists to explain the origin of this term from the term "capital" (as an adjective, meaning basic, principal, of primary importance) are not convincing.

(2) It must also be noted that the term used in our literature "norm of rentability" is not a particularly suitable one because under a planned socialist economy, a "norm" is a certain quantity fixed beforehand. We have to add that in many cases the terminology of the political economy of socialism, as used at present, lacks precision; various terms are understood by different authors differently. It is time to work out a unified scientific terminology.

(3) If the annual report of a concern does not show this average annual figure, the sum of all basic means of production at the beginning of the year and at the end of the year divided by two may be taken as its approximation.

(4) In order to find the annual sum of the circulating fund it is necessary to take from the annual report of the concern the whole sum of production expenditures during the year (expenses of production or the cost of the whole product) which is the annual sum of the consumed circulating fund. To this one should add the sum of the average annual stock of the circulating fund. The question whether we should deduct from the expenses of production the sum of depreciation has not yet been settled in our literature. In the table given below the sum of depreciation allowances was excluded from state farm production expenses.

In the agriculture of the temperate zone the year and the production cycle coincide (or almost coincide). The annual sum of the circulating fund is at the same time the sum of the ciculating fund which participated in production during the given production cycle. In order to avoid double counting of expenditures in determining the size of the annual circulating fund we should not simultaneously include in our calculations the expenditures made last year for the crop of the next year. We have to take either the first or the second. In our table the expenditures made in the preceding year for the crop of the current year, which were returned with the realization of the harvest of the current year were taken into consideration.

(5) The rentability or losses of the state farms were calculated only for the main activity because in the state farms annual reports (form No. 10) we could determine the circulating fund only for the main activity. The Moldavian state farms were not part of the USSR Ministry of State Farms' system and because of that were not included in the table.

A. Alexandrov:

A Book about the Socialist Budget

A. BACHURIN. The Economic Content of the Budget Under Socialism. 1958, 183 pp.

The question of the economic role of the state budget in social reproduction under socialism is not yet adequately worked out. Yet it is of great importance for the theory of Soviet finance, as well as for financial practice. Therefore one has to stress the importance and timeliness of the subject, to which the book of A. V. Bachurin is devoted.

In the first chapter the author analyses the essence and purpose of the budget in a socialist state. He adduces the difference between the budget as a definite form of economic relation, and the budget as a state financial plan. This is particularly important because, unfortunately, some economists still consider the budget only as a plan of revenue and expenditure, i.e. as a financial plan. A. Bachurin notes that such a characterization of the essence of the budget is one-sided and does not reveal completely its material content and the economic relations expressed by it. The author of the book under review defines the budget correctly taking into consideration its role in the process of social reproduction and distribution of the national income in socialist society. "The essence of the Soviet budget," writes A. Bachurin, "ultimately is that in the process of production and distribution of the national income, it is the basic economic form of the planned formation of the all-Union, centralized fund of monetary resources, utilized for the expansion of production, satisfying the material and cultural needs of the population and strengthening the might of the socialist state." (p. 9)

Characterizing the role of the budget in social reproduction, A. Bachurin points out that the concentration of monetary resources on an all-Union scale and their distribution through the budget is necessary for the steady development of social production on the basis of the preferential growth of heavy industry and for securing planned proportions in branch reproduction, as well as in terms of territorial considerations. At the same time he underlines the great importance of the budget in the matter of strengthening the regime of economy and revealing the reserves of production. It is noted in the book that budgetary financing of the economy is combined with the organization of enterprises without financing by the state.

And still, in our opinion, the question of the role of the Soviet budget in social reproduction is discussed by the author inadequately. The role of the state budget in social reproduction cannot be revealed without a sufficient analysis of its interrelation with the finances of branches of the national economy. The author speaks of large budgetary expenditures for the development of the economy, but does not show sufficiently that from the point of view of the national economy these are not expenditures, but advances for reproduction on an enlarged scale. Such advances are accompanied by a planned distribution of accumulation inside the branch, among the economic councils, ministries etc., and the directing of resources to the economic needs of individual enterprises. Consequently, with the help of the budget and finances of economic councils, ministries, administrations and enterprises, the funds of enterprises are increased in accordance with the plans of production development.

The finances of socialist enterprises serve the circulation of their funds in the process of production; the result of the process of production is the creation of new values, including the net income of society, which in a definite part is directed again through the budget and finances of branches of the economy for further development of socialist production. Thus, with the help of the budget and finances of branches the mobilization of free sources of accumulation in the national economy and their inclusion again in the circulation of the funds is accomplished. The state budget together with the branch and enterprise finances of the socialist economy implements the circulation of funds in the socialist economy as a whole. If the author were to consider this, he would reveal the role of the budget in social reproduction more adequately.

True, A. Bachurin mentioned this in his work. Thus, he underlined that the regularity of receipts in the asset part of the budget of socialist enterprises and the inclusion in the budget of excessive enterprise resources makes possible the necessary acceleration of the circulation of means in the national economy. Then he points out that the irretrievability of budgetary financing, under socialist economic conditions has a relative character, because "the increase of budget expenditures for the development of the economy promotes the extension of production" (p. 98). The author also notes that the financing of the expansion of the basic and circulating funds represents advances to these funds. But, he does not directly bind these questions with the problem of the circulation of funds in the national economy in the process of socialist reproduction on an enlarged scale.

A. Bachurin explains the leading role of the USSR state budget in the entire financial system, characterizing it as the basic way of forming the all-Union monetary fund, with the help of which the concentration of a considerable part of the national income is realized on a state scale. Along with this the author points out that the budget makes possible a rational (from the point of view of self-support) interrelation between the share of monetary resources which remains at the disposal of enterprises to be used for their own needs and the share which goes to the state. Thereby the leading role of the budget in the financial system of the USSR is considered not only from the point of view of the concentration of a considerable part of the national income in the budget, but also from the point of view of providing for the formation of financial funds of economic branches in accordance with the demands of self-support.

The importance of the budget in the development of Soviet credit is thoroughly shown in the book. The author underlines that an excess of revenue over expenditures in the budget is a necessary premise for larger credit investments in national economy. At the same time such an excess of revenues over expenditures is important for the realization of measures for lowering prices and for the successful fulfillment of the budget during the entire year. But it appears more correct that the excess of revenues over expenditures is needed first of all for securing a stable balance of the budget and uninterrupted financing of the national economy. It has a great significance for increasing financial resources, but the latter can also be achieved by other methods. Thus, for instance, if the savings banks were transferred under the jurisdiction of the State Bank, and kept their deposits

not in loans, but in the State Bank, that would be quite enough to cover the needs of various banks for additional credit resources even without the participation of the budget. Actually in 1957 the excess of revenues over expenditures in the budget amounted to 12.6 billion rubles, while the deposits in the saving banks increased by 16.8 billion rubles.

The routines by which the increase in deposits in savings banks is absorbed by the budget in the form of state loans, and the credit resources of the banks are replenished from the budget, could be changed. It is known, for instance, that up to 1929 the savings banks kept their deposits in the State Bank and other banks.

In the second chapter A. Bachurin analyses the revenue system of the budget. When characterizing different types of payments in a socialist economy into the budget, a short historical reference on each of them is given, after which the present construction of a given payment and the problem of improving the system of collecting it are discussed. In this way, for instance, the tax on turnover and the deduction from profit are considered. Speaking on levying a tax on the turn-over of industrial enterprises instead of collecting it at the market place, the author stresses the expediency of a wider use of the system of average rates instead of calculating the tax from the turn-over in the form of differences in prices. He also analyses the question of the significance of decentralized settlements on deductions from profit. In this connection the conclusion is drawn that under the new conditions of industrial and construction management the decentralized form of settlements on deductions from profit must receive the widest application.

Explaining the system of payments to the budget by state enterprises, the author ties these questions to the problem of strengthening the profitableness of state enterprises and organizations. He analyses the causes of unprofitableness of enterprises at present. In order to provide profitable work for all branches of industry, the author advances a proposal for the reconstruction of prices for industrial products with the purpose of bringing them closer to value. Bachurin does not speak of raising all prices for Department I, but considers that bringing prices closer to values should be achieved through lowering of the cost of production in heavy industry. He points out the necessity of striving in every way to raise the role of enterprise profits in the development of economic activity in order to strengthen their interest in the results of their work. In the opinion of Bachurin, it is economically desirable to differentiate the level of profitableness in terms of principal branches of industry. In heavy industry it should be higher than in the light and food industries, for the branches of heavy industry require greater investments compared with the light and food industries. These proposals deserve attention. Actually the profit remaining in the economy, in particular in heavy industry, is not sufficient for meeting the need for funds of individual enterprises and branches of industry for carrying on reproduction on an enlarged scale. Besides, profits are distributed unequally among enterprises and various branches of socialist industry.

Analysing the nature of the levy from the turn-over, the author points out that this type of payment into the budget essentially is not an income of the budget from taxation, just as the deduction from profits is not a tax. The Soviet budget, in contradistinction to that in capitalist countries, relies decisively on sources of income other than taxes. In a socialist society, writes Bachurin, taxes are only the obligatory payments into the state budget of the collective farms, cooperative organizations and population. This statement of course, is correct, but the author does not show the essential difference between the taxes from collective farms and cooperative organizations, on the one hand, and taxes from the population, on the other hand. The net income of the collective and cooperative organizations, though it appears as the property of individual producers, in essence is a component part of the net income of society. Therefore taxes from these organizations have a different economic content than taxes from the population. It is very important to underline this difference, especially because the net income of the cooperative-collective organizations is created with the decisive help of the state (the author himself mentioned this on p. 71). This also explains the fact that the state can, with the help of a levy on turnover, take part in the distribution of the incomes of the collective-cooperative organizations.

The author does not adequately reveal the nature of collective farm and cooperative taxes. As a result, he does not characterize clearly the economic content of the turnover levy paid by the cooperative organizations. On page 71 he notes that "the state renders great material and financial help to these organizations. The cooperative organizations buy a considerable part of their material funds from the state at reduced prices. Consequently the levy from the turnover paid by cooperative organizations is, before anything else, a part of the net income created in the state economy and part of the net income created by the workers in cooperative organizations."

In our opinion, it would be more correct to consider that the levy from the turnover of cooperative organizations is a form of participation of the state in the initial distribution of incomes of these organizations, for a part of these incomes was created, in essence, within the state economy, and the incomes created by the workers of cooperatives are created with decisive state participation.

One cannot agree with Comrade Bachurin that taxes from the population in a socialist society are an objective necessity, determined primarily by the existence of collective-cooperative ownership and the existence of two friendly classes — workers and peasants. Taxes from the population are today one of the sources of financing the building of socialism. They will probably remain as such for a long time. The author himself writes that "the state can, thanks to these taxes, finance expenditures amounting annually to approximately 50 billion rubles. Therefore, under present conditions it is not possible to cease levying taxes on the population without a corresponding replacement of these incomes at the expense of other sources" (page 53). This statement of the author is absolutely correct, but it contradicts his previous statement.

In the third chapter Bachurin explains the expenditures of the state budget of the USSR. He stresses the necessity of large budgetary expenses for the national economy and analyses them in detail from such a point of view. He notes the exceptionally important role of raising in every way the effectiveness of capital investments.

When analysing expenditures for social and cultural purposes, the author shows their importance for meeting more completely the cultural and living needs of the workers, but also for the development of socialist production too. On pages 126-127 he writes that "the influence of these expenditures is revealed to a great degree in the fact that with the increase of expenses for social and cultural purposes the training of cadres for different branches of the economy is extended...and the restoration of working capacity is made possible...while science and technique are developed." But Bachurin omits one essential point. Social and cultural construction serves the communist education of the workers and helps to overcome the remains of capitalism in the consciousness of men. Consequently communist education is

an important factor for the development and strengthening of socialist production-relations, one of the basic conditions for the successful advancement of our society to communism.

The last chapter of Bachurin's work is devoted to problems of planning the revenues and expenditures of the budget. Analysing the principles of planning the revenues and expenditures of the budget, the author notes that one of them is the principle of unity of all financial plans and their mutual coordination. In our opinion, this statement is correct. It is exactly the state budget which makes it possible to coordinate financial and credit plans, considering the demands of the law of planned development of the economy.

In Bachurin's book a number of important questions of the theory of finance are discussed in connection with the actual problems of financial policy. A number of problems in the field of budget payments, methods of financing the economy, strengthening the profitableness of enterprises etc., which confront the financial organs, are elaborated in the book. The work under review will be useful for financial workers as well as for a broad circle of those who are interested in the economic problems of socialism.

I. Lakhman and Ya. Orlov:

A New Manual on the Economics of Soviet Trade

"The Economics of Soviet Trade," a textbook. State Political Publishing House. 1958, 392 pages.

The textbook under review is planned for the students of economics schools and circles and seminars of the educational party network. It was compiled by the teachers' collective of the G. V. Plekhanov Moscow Institute of Economics and the Union Correspondence Courses on Soviet Trade.

The merit of the work under consideration is that, as a rule, the presentation of theoretical theses is coordinated with the practical economic problems of trade organizations and enterprises. By examples based on the experience of the foremost trade organizations and enterprises, the authors show the advantages of the new, more progressive forms of trade service for the population (use of more rational forms of commodity circulation, faster delivery of goods to the trade network, lower circulation expenses etc.).

Much attention is given to the essence of Soviet trade and its place in the economy of our country. In the textbook an explanation of Soviet trade, as a form of commodity circulation is given; its basic differences from capitalist trade and its advantages over the latter is shown. The interrelation of Soviet trade, money circulation, the credit system and the state budget are discussed.

In some textbooks on the economics of Soviet trade, and not seldom in pedagogic practice, when discussing the role of trade in expanded reproduction, a number of functions of Soviet trade are listed. Among such functions, for instance, are the influence of trade on production, the study of demands of purchasers, the expansion of the trade network etc. With such an approach to the problem, the basic function of Soviet trade—bringing goods from production to the consumer—is confused with its concrete forms and methods of realization. In the textbook under review the main function of Soviet trade is distinguished and it is noted that its realization "presupposes a definite system of interrelations between production and trade, between trade and the sphere of personal consumption" (page 11).

In the textbook the following detailed definition of Soviet trade is given: "...Commodity circulation between the state and the collective farms, and also the exchange of consumption goods for the monetary income of the population under socialism is serviced by Soviet trade, the enterprises and organizations of which are separated into an independent branch of the economy" (page 8). This definition of Soviet trade is more complete than those found in textbooks previously published. But it seems to us that still it is far from being exact.

Soviet trade develops in three forms — state, cooperative and collective farm — and only state and cooperative trade enterprises are included in the independent branch of the economy. As for "kolkhoz" trade, sale and purchase there is carried on directly between the producers and consumers. Thus, the definition formulated in the book does not include kolkhoz trade as a component part of Soviet trade. Further, nothing is said in the cited definition about the circulation of means of production within the state sector. Obviously, the authors think that this circulation cannot be considered as trade. This idea is revealed on page 219 more positively: Soviet trade is considered there as a part of the sphere of commodity circulation in our country.

The essential peculiarities of the circulation of means of production among state enterprises are pointed out in the book correctly. Here the owner of commodities is not changed, the means of production are realized according to plans, requests of enterprises etc. But, as far as the authors omit that Soviet trade is a form of commodity circulation and that the means or production within the state sector are realized as commodities, their treatment of Soviet trade as a part of the sphere of circulation cannot be accepted as consistent.

The conceptions "commodity circulation" and "trade" express one and the same phenomenon — the exchange of goods by means of money, through sales and purchase. Therefore, it seems to us, one should not contrast these conceptions and declare trade as a part of the sphere of circulation etc. In our practice it is customary to call trade the circulation of consumers' goods in distinction from the circulation of the means of production, which has its specific peculiarities and is realized mainly in the form of material-technical supply to enterprises. As a result of essential differences between the realization of goods of consumption and the circulation of means of production these two types of turnover are considered and planned separately. But all this should not screen the essences of these phenomena. In both cases we deal with selling and buying, i.e. with trade. It seems to us that in a textbook a complete characterization of Soviet trade should be given, including the circulation of the means of production, as well as of consumers' goods. After this, one should explain what is understood by the term Soviet trade. This would help the reader who is just beginning to study the economics of Soviet trade to understand better the subject of this course.

When discussing the relations between Soviet trade and the sphere of consumption, the authors advance the thesis that socialist society, supposedly, does not know any contradiction between production and consumption (page 15). Such a point of view does not correspond to reality. Certainly, we have no social basis for antagonistic contradictions, including antagonistic contradictions between production and consumption. The aim of socialist production is to satisfy most completely the needs of society and to raise systematically the well-being of toilers. But one cannot on this basis deny the existence of contradictions between

production and consumption under socialism. Ignoring this contradiction hinders the understanding of important laws of development of the socialist economy and leads to underestimating the difficulties which socialist society has to overcome in the process of economic construction. In our literature one can also find other expositions on the problem of the contradiction between production and consumption in socialist society. Sometimes this contradiction is reduced to the fact that in certain stages of development socialist production does not completely provide for meeting the needs of the population for some types of production. One cannot agree with such a point of view. The contradiction between production and consumption under socialism lies in the fact that with the growth of production new demands arise and the growth of needs, in turn, gives a stimulus to production. Such a contradiction exists in all stages of building socialism.

The problems of planning the retail circulation of commodities occupy a central place in a course on the economics of Soviet trade. Working out a plan of commodity circulation has to be based on a thorough study of consumers demands in different regions of the country. The authors explain the basic features of commodity circulation in our country. Among them: constant growth of the volume of turnover, improvement in the assortment, forestalling the tempo of growth of rural turnover and raising the share of the backward regions and outlying districts of pre-revolutionary Russia in total commodity circulation. All this is illustrated by proper statistical data. But some figures cited in the book do not cover completely this or that point. For instance, saying that rural commodity circulation is growing more rapidly than urban, the authors compare only the data on the tempo of growth of retail trade in towns and villages. Yet a comparison of the change in the volume of turnover per capita could serve as a more correct and convincing proof of operation of this law. Measures taken by the party and government for the development of collective farming will result in still greater increase in the incomes of collective farmers, and, consequently, in the expansion of rural commodity circulation.

Data concerning the growth of commodity circulation per capita would allow the authors to show better the changes in the volume of the turnover of goods in terms of republics and regions of the country which occured during the years of Soviet regime. For instance, in 1925 per capita commodity circulation in the RSFSR was four times higher than in the Tadjik SSR, while in 1939, 39% and in 1956, only 19%.

The considerations of the authors on the problem of planning inventory in retail and wholesale trade are interesting. In our economic literature for a long time it was considered that one of the advantages of Soviet trade was that the greatest part of the stock of goods, especially goods other than foodstuffs, was in the retail sector. Such an opinion represented the "theoretical" substantiation of existing practice. Thus in the beginning of 1956 the stocks of commodities in all the branches of trade amounted to 124.6 billion rubles, of which retail trade amounted to 98.9 billion and wholesale to 25.7 billion rubles. Consequently almost four-fifths of the total stock of commodities was concentrated in retail organizations and enterprises. Such a distribution of stock was explained to a great extent by the shortage of space in warehouses, belonging to wholesale enterprises.

It is properly pointed out in the book that on the basis of the developed construction of warehouses and the centralization of the system of supplying the retail trade network, the existing proportion in the distribution of inventories must change radically. A larger part of the stocks will be concentrated in the wholesale branch, and this will make better storage possible and a steadier supply of a larger assortment to retail enterprises. One has to note that for a more correct distribution of the stock of goods improvement in the organization of warehouses is of great importance. Very valuable in this respect is the experience of a number of trading organizations of the Estonian SSR, of the city of Gorky and others, which have combined retail and wholesale warehouses.

The uninterrupted supply of the retail trade network depends on the organization of the flow of commodities in the country and on the activity of the wholesale trade units. One of the most important advantages of Soviet trade over capitalist trade is the rationally organized flow of commodities and a more economical trade structure that permits a considerably faster delivery and lower cost in bringing goods from producer to consumer. In the textbook under review data indicating the advantages of Soviet trade over capitalist trade are given. For instance, in the US expenditures on circulation in wholesale trade alone amounted to 11.8% of the turnover, while in the USSR they amounted to 1.6%, i.e. were seven times lower.

The book discusses the problems of organizing and planning wholesale trade and the relations between wholesale organs and industrial enterprises. Describing the important role of wholesale trade in commodity circulation, the authors at the same time underline the necessity of extending direct contractual relations between retail trade organizations and large stores with industrial enterprises.

In the work under review the following points are also mentioned: the development of the material-technical base of trade and the reproduction of the basic funds of trade organizations; the nature of labor in Soviet trade; expenditures on circulation; prices and finances. The methods of planning labor and the wage as well as fund revenues and expenses of trade organizations are discussed. In the chapters devoted to these problems, proposals for improving existing practice are included. Thus, in the chapter "Consumption Goods Prices in the USSR" defects are noted connected with the fact that rural retail prices are established on a higher level than those for towns and cities (7% higher). "This impedes the development of trade in the villages and induces the rural consumer to turn to the town for purchases which not only does not help to economize the working time of the collective farmers but leads to overloading the town network, and also creates possibilities for speculation, especially at points where the urban and rural trade networks adjoin" (page 261). The authors draw the (in our opinion, correct) conclusion that in the future the lists of retail prices for towns and villages should be the same, the difference between prices for town and village should be limited only by the extra charge for transportation when goods are sold in out of the way regions.

In the last chapter the method of analysing the balance of trade organization is discussed. The authors indicate correctly that the ability to gain an understanding of the balance is of great importance for the successful direction of the business of trade organization and control over its activity. But the analysis of the balance given in this textbook essentially is of a purely accounting and bookkeeping character; the economic aspect of the balance is presented inadequately. Beside this, the method of analysis given in the book is out-of-date in many respects, and is not used in practice. For instance, the method of determining from the balance the sum of inventory resources belonging to the trade organization and the status of solvency according to the analysis etc., does not meet the requirements of practice.

One should note that aside from the defects listed above

There are a number of inaccurate statements in the textbook under review. Thus, on page 17 it is said: "The possibility of planned coordination of production and consumption is inherent to the nature of Soviet trade..." Yet it is known that the necessity and feasibility of planned development of the socialist economy, and in particular, of planned coordination of production and consumption, do not ensue from the nature of trade; they are determined by the socialist method of production and the prevalence of social ownership.

In our economic literature the growth of commodity circulation is often considered as one of the factors promoting the increase in labor productivity in Soviet trade. This thesis is also found in the textbook under review. But it is not the growth of commodity circulation in itself that forms the basis for the increase in labor productivity. Just the contrary, the growth of labor productivity of those who work in trade, based on the introduction of new technique, improvement in the organization of labor etc. is one of the important conditions for the extension of commodity circulation.

On page 257 the authors write: "The level of well-being is characterized by the income of the population and by prices for consumption goods and services. Consequently raising the level of well-being can be achieved by an increase in wages, as well as by reducing retail prices." It is well-known that under socialism the level of well-being of the workers is determined not only by their individual incomes in the form of wages, payments per working day etc.; but also by the social and cultural funds, which play an extremely important role in satisfying the material and cultural requirements of the people. Last year alone the sum of all payments and privileges received by the population from the budget amounted to more than 201 billion rubles.

It seems to us that the structure of the textbook itself needs to be more precise. One special chapter of the book is devoted to the organization and methods of planning of Soviet trade. But is it desirable to speak of concrete methods of planning different aspects of trade activity before the reader is acquainted with the proper subjects of planning (commodity circulation, inventory, expenses of circulation, etc.)? Obviously not. The methods of planning have to be discussed along with the examination of concrete aspects of the trade plan.

In every textbook the form and style of presentation are of exceptionally great importance. One has to say that the authors and the publishers have taken pains to make the presentation simple and accessible to a broad circle of readers. In spite of that, some careless formulations are found in the book. For instance, in the chapter "Expenses of Circulation" we read: "...As the result of anarchy in capitalist production and circulation and the fierce competitive struggle, additional expenditures get entangled (?) and degenerate into pure expenses of circulation" (page 220). On page 73 there is the following "pithy" sentence: "Meeting the food needs is realized by purchases of goods in trade enterprises through retail commodity circulation."

The noted defects somewhat lower the merits of the book. But, as a whole, the book under review deserves a positive evaluation. It will be of great help to readers studying the economics of Soviet trade.

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3. Kolotilkin:

The Possibilities for Lowering Housing Construction Costs

In a resolution of the Central Committee of the CPSU and he Council of Ministers on the "Development of Housing in he USSR," passed on July 31, 1957, the task was set of end-ng in the next 10 to 12 years the shortage of workers' ousing. In the Sixth Five-Year Plan there is a provision or increasing the volume of housing more than twice com-ared with the Fifth Five-Year Plan. It is planned through tate housing alone to build a total of 215 million square eters of floor-space. In 1956-1960 the state capital in-estment in housing will increase, compared with the Fifth ive-Year Plan, by 78 billion rubles. In the following years he volume of capital investment for these purposes will in-rease even more. Along with the construction of dwellings y the state the construction of houses by workers and em-loyees of industrial enterprises and organizations, as well s the individual construction of living quarters in towns, rban settlements, state farms, the timber industry, RTS nd collective farms will develop on a large scale.

Such a substantial increase in the volume of housing dur-ng the Sixth Five-Year Plan demands an essential lowering f the still high cost per square meter of living space, as as noted at the Third All-Union Conference on Construc-ion, held in April, 1958. Fulfillment of the directives of he 20th Congress of the CPSU concerning the lowering of ousing costs during the Sixth Five-Year Plan no less than 0% will allow us to economize billions of rubles.

But the cost of housing should not be lowered at the ex-ense of quality. Lowering the cost of construction should e achieved through extensive use of economic pilot-proj-cts, the introduction of industrial methods of work, lower-ng the prices of manufactured articles, exclusion of archi-ectural and designing extravagances and shortening the me of construction. The problems of improving the quali-y of housing, of the general level of comfort and substan-ality of dwellings and the area around them remain in the enter of attention. A characteristic peculiarity of housing onstruction during the Sixth Five-Year Plan is that houses re being built with separate apartments to be occupied by ne family.

In 1956-1957 the research institutes and institutes of lanning and building carried on considerable work in order o find more economic dwelling projects. They succeeded n lowering substantially the cost of one square meter of ving and useful space and to lower by 30-35% the rent for partments, while bettering their comfort. This was chieved through a decrease of living space of separate partments on an average of 25% and their subsidiary space y 50%, as well as by lowering the height of the rooms and arrowing the staircases. As a whole, the cost of housing ould be lowered by 6-7% in 1960 thanks to the introduction f new pilot-projects with more economical planning and pace dimensions.

But the designs and plans of dwelling construction require rther perfection. In the projects solid, heavy brick walls, 1-64 centimeters thick, still are provided while, consider-ng the capacity to sustain weight, walls of 25-38 centime-ers thickness (depending on the number of stories) are sufficient. The expenditure of materials for foundations and walls of cellars, inner walls and floors and ceilings still is considerable. As a result, the weight of construction per cubic meter of building is more than 400 kilograms.

Deficits in building materials at present are keeping back the tempo of housing construction. Calculations show that reducing the weight of buildings by using materials mastered by industry for mass construction (brick, cement etc.) will make possible a reduction of the cost of one square meter of living space for the USSR as a whole by 1.2-2% in 1960.

Better and more economical equipment will also make possible lowering the cost of housing construction by approximately 1%. Considerable reserves for lowering the cost of building living quarters are to be found in the manner of planning towns and utilizing the allotted housing area. Of particular importance are the problems of housing location, the density of building, the dimensions of blocks and of the planning and organization of public services.

Placing housing construction on vacant territory, when no demolition of existing housing and uninhabited premises is required, in many cases is the most economical. Wrecking buildings considerably raises the cost of construction and lowers the tempo of construction. But this does not mean that reconstruction of the existing buildings is always connected with raising the cost of construction. Therefore the problems of expedient distribution of housing, selection of types of dwellings and the relation between their dimensions have to be solved for every town or settlement on the basis of a thorough technical-economic comparison of variants, which take into consideration the size of the town and its significance, the scale and tempo of construction, the character of construction, the availability of vacant territories suitable for the development of a town, climatological and other conditions.

Practice shows that it is necessary to achieve maximum preservation of the existing housing, avoid unnecessary wrecking of buildings fit for habitation and to strive to distribute new housing on vacant territories. Construction in large massive groups, by the conveyor method, is the most economic approach. For instance, at the construction of whole blocks of dwelling in the Pessochnaya street district in Moscow the cost per square meter of living space was 6-7% lower and the expenditure of labor 9-10% lower than at the construction, based on the same project, of separate houses in different districts of the city. The dispersion of building sites invariably leads to greater expense in the engineers' network and to an increase of expenditures for servicing the construction, and besides, makes the introduction of the conveyor method difficult. The dispersion of building sites in a town still is one of the essential defects in the distribution of construction. Thus in Kharkov the building of houses in recent years was carried on mainly by the selective method on a great number of sites: 258 houses were built on 231 sites; at Penza, where comparatively few houses were built, they were constructed on 13 sites in different parts of the town, etc.

When houses are built in large groups, the best methods of planning the blocks should be used, and the natural features of the site should be considered.

When towns are being constructed, the blocks, we know, do not have large dimensions: 4 to 6 hectares when the houses are 4 to 5 stories and 3 to 4 hectares when the houses are 2 to 3 stories. Making the blocks occupied by

dwellings larger, up to 9 or 12 hectares, lowers the proportion of street area from 25 to 30%, and when planning on the principle of "micro-districts" —up to 20-22% of the total residential area. At the same time the space of intra-block passages is decreased by 10-20%. Consequently, the expenditures on streets and passages, as well as waterlines and sewers in residential districts with blocks occupying eight hectares could be lowered 10-15%, compared with the expenditures for these purposes in residential areas with blocks occupying four hectares. Aside from this, enlarging the blocks makes it possible to minimize the influence of the locality's relief on the cost, through a free arrangement of houses with the most complete utilization of the natural relief of the area.

Covering the areas within the block with asphalt is widely practiced in our country. It would be desirable to limit the use of asphalt or paving, even local inexpensive materials, and to use them only for intra-block passages. Planting greenery in these areas, including areas between buildings, should be widely done. The cost of planting greenery is 7-8 rubles per square meter while asphalt on the same territory costs 50 rubles; expenses for the maintenance of one square meter of greenery is 4 rubles per annum, while of one square meter of pavement — 12 rubles.

New housing construction is often not sufficiently compact, and this results in increasing the length of engineering work and roads within the blocks and regions. In turn this makes housing more expensive. Usually this happens because on territory suitable for the construction of four or five story houses, houses of fewer stories are built. Such was the case in Kuibyshev and in a number of towns in Siberia. Lowering the compactness of housing is often tolerated by the planning organizations. The compactness of housing at some projects is 10 to 15% lower than the established norms. Urban lots should be utilized economically. The housing density norms should be maintained unless there is sufficient reason to diverge from them.

Problems of economy in projecting and building boiler-rooms deserve serious attention. Group boiler-houses have a higher coefficient of efficiency than individual boiler-rooms, make it possible to lower fuel expenditure and repair expenses 15% and to reduce the necessary personnel almost 50%. By constructing group or regional boiler-houses instead of boiler-rooms for separate houses the cost of one square meter of living space can be reduced 10 to 12 rubles.

Generally speaking, with the proper method of planning and building residential blocks and the best variants in planning and organizing public services and engineering equipment, it is quite possible to lower the cost of one square meter of living space no less than 20-30 rubles or 1.5-2%.

Thus better and more economical dwelling designs represent an important reserve for lowering the cost of housing. The use of these reserves will make it possible to lower the cost of housing by 10 to 12% in 1960 compared with the level known in the early days of the current Five-Year Plan.

Extensive reserves for lowering the cost of housing are to be found in the production of building-materials, details and various equipment. About 40% of the direct expenditures on housing are for the building materials and articles (at selling prices). Lowering selling prices on building articles should be based on lowering their production cost.

The cost of production of building-parts and articles is composed of two basic groups of expenditures. The first group is represented by expenditures on raw materials and semi-manufactured goods; their share in the cost of production of building details and articles is approximately 45-60%. The second group is made up of expenditures on raw material and semi-manufactured goods to complete the production of articles; they form the remaining 40-55% of the cost of production. Obviously, the basic reserves for lowering the cost of production of articles manufactured at factories and plants should be found in these two groups of expenditures.

The principal components of the expenditures for raw materials and semi-manufactured goods are the expenses for payments to the factories or plants which supply them, for transportation to the enterprises manufacturing building material and also the expenses connected with low-quality raw material and semi-manufactured goods, as well as with the non-observance of planned dimensions and weight of articles.

Lowering selling prices for raw and other materials on the basis of lowering their cost of production in corresponding branches of industry will directly influence the lowering of the cost of production of building details and parts. For instance, if the selling prices on raw materials and semi-manufactured goods were lowered by 5% and the proportion of expenditures for these purposes were 40% of the total cost of building details and parts, their cost would be lowered by 2%, and the cost of housing approximately by 1%.

It is just this that explains the role of improving the work of cement and lime factories, non-metallic mineral quarries and other enterprises supplying raw materials and semi-manufactured goods for the production of building details and parts, and lowering their cost of production. Reserves available here are very considerable. Thus, accordi to data of the Union Ferro-Concrete Research Institute, as the result of taking a number of measures for raising the technical level of production of non-metallic minerals the cost of production of sand can be lowered from 9 rubles to 2 or 3 rubles, and the cost of production of brocken brick and gravel from 37 rubles to 20 rubles per cubic meter. A corresponding reduction of selling prices for non-metallic materials will allow a lowering of the cost of production of compound ferro-concrete by 4 to 6%.

Curtailing the expenditures for the transportation of raw materials and semi-manufactured goods which constitute a considerable part of their cost depends on the proper distribution of enterprises and the rational selection of source of supply. Calculations show that through the better distribu tion of quarries it is possible to achieve in the near future a reduction of the average radius of haulage of brocken bricks and gravel from 470 to 180 kilometers and consequently to reduce the cost of these fillers by approximately 30 rubles per cubic meter. Shortening the radius of hauling fillers alone would make it possible to lower the cost of one cubic meter of ferro-concrete articles by 20 rubles or 4 to 5%. The existing practice of enterprises of underloading inert materials is raising expenditures on transportation. This underloading frequently is more than 10% of the volume of supply, and this raises the cost of the manufactured product It is also ascertained that the loss of cement amounts to 1.5 to 2% during one haulage, but in cases of numerous transshipments, 10 to 12% is lost from atomization. The transition to mechanized unloading of cement will sharply reduce these losses. Very often serious losses in raw materials and semi-manufactured goods are caused by defects in the organization of transportation within the factory and by inadequate techniques on the part of enterprises.

The quality of initial raw materials and semi-manufactured goods is of great importance. Low quality results in higher expenditures, lengthening the cycle of production and the efficiency of equipment, raising the expenditures of labor and the use of electric power. For instance, the suppl of low-quality slag, without necessary fraction grading, to th

entral Administration of the Moscow ferro-concrete plant re-ults in an over-expenditure of cement and raises the cost of one ubic meter of large slag-blocks by 15 rubles or 6%. Non-bservance of planned dimensions of details, norms of tol-rance in length, width and thickness of articles and ex-ess weight became a mass phenomenon. Analysis of fac-ual data shows that strict observance of dimensions and eight of concrete and ferro-concrete products will make it ossible to reduce the expenditure of materials and lower he cost of manufacturing no less than 2 to 3%.

Thus enterprises in the building-materials industry have arge reserves for reducing expenditures for raw materials nd other initial materials, used for manufacturing articles. t the same time it is necessary to reduce expenditures in anufacturing articles from raw materials and semi-anufactured goods. The basic elements of these expend-tures are expenses for wages, the thermal processing of rticles, on maintenance and operation of equipment and al-o on shop and plant maintenance. The following basic fac-ors influence the level of these expenditures; producing ca-acity and specialization; the construction, dimensions and umber of typical sizes of manufactured articles; the tech-ology of production; the supply of enterprises with raw ma-erials and semi-manufactured goods; the organization of abor and wages; the mechanization and automation of pro-uction; the planning of manufacturing and consumption of he products and the waste of capital by enterprises.

It is known that the bigger the volume of production, the ower the cost of production. That is why the proper selec-ion of enterprise capacity is so important in planning. In-reasing the output of product per area unit occupied in roduction also promotes lowering the cost of the product.

In this connection let us note the great importance of tak-ng measures for specialization and cooperation. Production n one square meter of such area and from one cubic meter f steaming chambers is higher in specialized plants than in eneral enterprises. For instance, the cost of articles is-ued by the specialized plants producing mixed ferro-con-rete, belonging to the Central Administration of Moscow erro-concrete plants is 15 to 25% lower than of articles roduced by general plants.

In order to extend the specialization of plants and facto-ies it is necessary to decrease the number of typical sizes f articles and to improve the construction and selection of ational dimensions of construction details. The multiplic-ty, for instance, of concrete and ferro-concrete products imits the possibility of utilizing the moulding area and con-equently lowers the effectiveness of the enterprise. As the esult of this, the permanent expenses — amortization and verhead expenses — are imputed to a smaller amount of roduction thereby raising unit cost.

The most important method of lowering the cost level is he perfection of technology. Efforts should be made to re-luce the expenditure of material, power and labor per unit f manufactured product, to intensify the production process, to horten the cycle of production, to raise the quality and de-ree of readiness of articles at the plant. Methods of per-ecting technology are diverse: high-speed drying and back-ng of bricks made of clay; the vacuum — stiller method of utoclave processing of silicate bricks; utilization of cement rindings for making concrete and ferro-concrete articles nd heating with infra-red rays; processing concrete arti-les by steam in autoclaves, etc.

The decisive conditions for the fulfillment and overfulfill-nent of the production program and consequently for lower-ng the cost of production are formed during the uninter-upted and rhythmic work of enterprises. For this purpose t is very important to guarantee a constant supply of raw materials, and semi-manufactured goods. More efficient supply makes it possible to use production capacity more thoroughly, to increase output and to reduce the cost of manufacturing building articles.

The importance of increasing the output of building materials and articles can be judged by the following example. If the Moscow brickyards and ferro-concrete plants were to increase the output of their products by only one percent, the builders could obtain an additional 17 million bricks and 20,000 cubic meters of ferro-concrete, which is enough for building 15 dwellings of 15 stories each.

Improvement in the organization of labor and wages also should be subordinated to the task of increasing output and lowering the cost of production. Thus, in plants no. 3 and no. 5 of the Moscow ferro-concrete Central Administration, in the Leningrad plant "Barricade" and other advanced enterprises the expenditure of labor per cubic meter of compound ferro-concrete products was 1.5 to 2 man-days and the annual output per worker was 150 to 200 cubic meters; at the same time at many enterprises in the building-materials industry 3.5 to 4 man-days were spent for the production of one cubic meter of compound ferro-concrete products and the annual output per worker was 60 to 100 cubic meters. This is explained, first of all, by the low level of mechanization of works at many enterprises and by insufficient specialization.

The possibilities of automation are enormous. Enterprises producing solutions, concrete, large-size concrete blocks, ferro-concrete articles etc. could be automatized according to uniform schemes, because of the similarity of their technological processes.

The condition necessary for making plants and yards profitable and completely using their capacity is the well-organized planning of production and consumption. Decreased consumption of materials and articles during the early months of the year causes financial and manufacturing difficulties at enterprises, requires the organization of additional storing space and sometimes curtails production. Therefore the customers (placing orders), the contracting organizations and planning organs should pay most serious attention to providing the proper amount of building material orders.

Plants and factories bear no small responsibility for the waste of capital, connected with the spoilage of products and idle equipment, resulting from a shortage of material-technical supply and poor organization of repairs of equipment. Expenditures resulting from defects in production, paying fines, expenses on arbitration etc. still are considerable.

Calculations show that on the basis of lowering the cost of production and freight tariffs the selling prices of building materials, details and construction could be reduced in 1960 by approximately 10 to 13%, compared with the level of prices obtaining in the beginning of the current Five-Year Plan. As the result, the cost of housing would be lowered by 5%.

Mastering the mass production of building-materials, details and construction is one of the most important tasks. Calculations indicate that the introduction of effective building materials and details for foundations, walls, overlappings, roofs, stair-cases, floors, partitions, interior-trimming and facing materials, various varnishes and paints, home equipment etc. will permit a reduction of the cost of building by 3% in 1960, while raising its quality. Operating expenses would also be reduced.

Thus the cost of housing could be lowered by the end of the Sixth Five-Year Plan by a total of 8%, considering the reduction of selling prices for building materials and details as the result of reducing the cost of manufacture and

also because of the production and introduction of new effective materials.

To our regret, we have to state that these important problems of building are being solved very slowly. For instance, in spite of the fact that recently the government had passed several resolutions concerning the development of production of light fillers, as yet there is no one enterprise fully occupied in producing them. In spite of the good perspective for the industrial method of building housing with walls made of blocks and panels, fabricated on the base of cellular concrete, their industrial production has still not been mastered. Basically, this is explained by science lagging behind practice, the weakness of the experimental base of scientific organizations and inadequate attention by scientific organizations to the problems of introducing theoretical research into production.

Considerable reserves for lowering the cost of housing are connected with perfecting the organization, mechanization and technology of construction. During the Sixth Five-Year Plan the cost of building-assembling work must be lowered no less than 7% of their estimated cost through the reduction of direct and overhead expenses.

The basic means for reducing the cost of building and assembling work are: securing continuity and rhythm in carrying out the work; perfecting the organization of labor and wages; utilizing equipment more effectively; more economic expenditure of materials, details and constructions; improving the quality of materials, articles and building-assembling work; reducing overhead and other expenses for servicing construction.

One of the most important means of lowering the cost of construction is securing continuity and rhythm of execution of building-assembling work by introducing the continuous production-line method into construction. The effectiveness of the line-production method was proved in 1939 during the building of 23 six-storied dwellings of the Moscow Soviet. As shown by the building experience at one of the blocks in Novo-Kuibyshev in 1956, the effectiveness of line-production methods is characterized by a reduction of the length of construction time by 20% and of labor required by 11%. This results in lowering the cost of construction by 6%.

The rhythmic, steady yearly flow of building products is unthinkable without the introduction on a large-scale of the line-production method. This is confirmed by numerous data on the extremely uneven completion of housing. The lack of necessary preparation and supplies for construction and the deep-rooted, deleterious practice of bringing into operation at the end of the year only 60% of the objects planned for the year, result in uneven loading and incomplete utilization of productive capacity of building organizations, in irrational utilization of the labor force during the year and in a decrease in the volume of works on hand. For instance, the volume of masonry completed by the same number of workers working evenly during the entire year could be increased at many building sites by 30 to 50%. A check-up of the amount of work performed during a day by 250 builders, which was carried on by State Building Administration together with a number of ministries in 1955, showed that through standing idle alone an average of 1.5 hour per shift is lost, i.e. about 20% of working time. This idleness is caused to a considerable degree by defects in the organization of the line of work and the working place, as well as by violation of labor-discipline.

But the non-productive losses of working time at building sites are explained mainly by poor organization of material-technical supply to construction work. As a result of the above mentioned check-up of amount of work performed during a day by 250 builders, it was revealed that 70% of all idleness was caused by the lack of materials and details. Therefore, in order to secure continuity and rhythm of work on building, first of all, the material-technical supply for construction should be improved.

In our country more than three million workers are occupied on building and assembling works. Therefore the liquidation of standing-idle on construction, and ensuring the continuity and evenness of work of building organizations are an enormous reserve for increasing labor productivity, equal to drawing into construction about 600,000 new workers.

Further perfection of the organization of work on construction and the introduction of complex mechanization of building work will make possible a considerable reduction of the actual expenditures of living labor at building sites compared with norms and consequently increase the output of workers 10 to 15%, along with the increase in wages of workers approximately by 5 to 6%. Reducing the expenses for wages on the basis of raising labor productivity will reduce the actual cost of construction by 1 to 1.5% of the estimated cost.

In spite of the comparatively small proportion of the cost of mechanization in the total cost of building and assembling work (only 4 to 6%) not insignificant reserves for lowering the cost of housing are to be found in the proper utilization of available machinery. The basic means of reducing the cost of running equipment is through shortening their working time on separate operations. But this is not stimulated by the existing order of settling accounts with the trusts and mechanization administrations. It is desirable to pay for the work of the basic equipment at the building site — the turret crane — not on the basis of calendar time at the building site, but per unit of work performed — one square meter of living and useful space.

Equipping our construction enterprises with economical and more mobile types of cranes of various sizes and lifting capacities deserves serious attention. Extension of the length of time equipment is used per day on an average of 1.5 hours; lengthening the amortization period 10 to 15%; reducing the time for assembling and dismantling turret-cranes by 25%: using the capacities of the constantly growing fleet of machines and equipment more completely; concentrating mechanized equipment in specialized enterprises having repair units and improving the servicing of the fleets of excavators by auto-transport — all this will allow a reduction of the expenditures for the use and maintenance of mechanisms approximately 15 to 18%, which will result in lowering the cost of construction an average of 1% compared with the estimates.

Up to 65% of the cost of current housing construction effected by industrial methods consists of expenditures for materials and constructed units. Therefore, a saving on materials of 2 to 2.5% means a lowering of the cost of construction by 1.3 to 1.6%. This can be achieved by the elimination of losses from breakage and pulverization of materials, observing strict order of use according to differential norms, careful organization of storing and hauling, proper preparation and utilization of solutions and concrete, use of astringent and inert materials according to weight, substitution of expensive materials by less expensive local materials and reuse of packing materials.

One can judge from the following example the meaning of the struggle for economizing the expenditure of materials, considering the enormous scale of our construction work. In 1958 in the USSR there must be produced about 29 billion bricks (in conventional units) for erecting walls (aside from concrete, slag-concrete blocks and blocks of natural stone). An economy in wall-material in the amount of 1.5 to 2% only compared with the existing level, would mean 500 to 600

million bricks (in conventional units), which is sufficient for building 1.5 to 2 million square meters of living quarters. Yet it is not rare that breakage of bricks on construction sites amounts to 10%. By the end of the Sixth Five-Year Plan about 55 million tons of cement will be produced annually. Reducing the expenditure of cement by 1.5 to 2% only through reducing losses from loading and unloading would make it possible to save annually about one million tons of cement, which is sufficient for building an additional 4 to 5 million square meters of living space.

The establishment of rational schemes for transport and the proper planning of haulage of building materials with a maximum reduction of cross-shipments has great significance for lowering transportation expenses. This would eliminate unjustified haulage of materials in both directions.

Along with this the organization and utilization of motor transport should be improved in every possible way. In Moscow the number of trucks used for carrying bricks decreased three times as the result of putting into operation a system of centralized hauling. Truck-trailers should be used more widely. Obligatory utilization of trailers for the haulage of various building-materials would allow a reduction in the cost of motor-transport by 20 to 25%. The delivery of bricks in packets — the basic and yet still deficient wall material — deserves special attention. Using such a method of delivery would reduce to a minimum the losses of brick from breakage at construction sites and free some 30,000 workers.

Our builders have to develop in every possible manner so-called small-scale mechanization, which can be widely used in haulage within the construction site, for assembling and other works. This will free thousands of workers from hard manual work.

The cost and quality of construction depends directly on the quality of materials, details and construction work received. The higher the quality, for instance, of the compound ferro-concrete details, large wall-blocks, brick and other materials and products, the better their finishing and manner of execution, the lower are the additional expenditures of building organizations in labor, material and money. In the Rostov municipal construction administration it was calculated that if un-productive expenditures could be avoided in experimental construction, caused by low quality wall blocks, staircase flights and landings and especially joiners' articles, the wage fund could be reduced from 14 to 12% of the total cost, the cost of construction could be reduced by 2%.

In order to raise the quality of building materials and details manufactured at plants and factories, it would be expedient to set their selling prices in accordance with their grade. This would promote the responsibility of enterprises and their interest in issuing high quality products, would help to lower the labor requirements for housing construction and would allow a reduction of the cost of building and assembling work by no less than 0.5% of their estimated cost. At the same time the quality of the building and assembling work has a direct influence on the cost of housing, as well as on the use and maintenance of housing. Low quality building and assembling work still is one of the greatest defects of housing construction. In 1955 in the RSFSR 8,937 dwellings and other buildings were accepted for occupancy; of them only 108 units had an appraisal of "excellent," i.e. 1.2%; — 3,305 with an appraisal of "good," i.e. 37% and with an appraisal "satisfactory" — 5,524 i.e. 61.8%.

Special attention should be paid to raising the quality of masonry, for its low quality leads not only to lower durability, but also to lower thermal insulation of outer walls and sound insulation of inner walls. Aside from this, finishing work becomes complicated and useful space of the building is decreased.

Losses suffered by our country from the low quality of construction amount to hundreds of millions of rubles. To this has to be added additional expenses in the use of dwellings in the future, resulting from the low quality of work, and amounting also to millions of rubles. Owing to defects in bookkeeping and accounting on construction it is impossible to give exact figures on the losses of our economy caused by the low quality of building and assembling work. In any case, improvement in the quality of this work and of building materials and articles will permit a reduction of the cost of construction by no less than 1%.

In the estimated cost of construction are included the overhead and other servicing expenses (for temporary buildings and structures, for carrying on work during winter, etc.) which amount to 20% of the cost of construction. Basic measures for lowering the overhead expenses are: reducing the length of time for construction, raising labor productivity, lessening the amount of basic wages in the total expenditures for building and assembling work, improvement of the structure of building organizations, and concentration of construction.

Directives of the 20th Congress of the CPSU have set the task of raising labor productivity in construction by at least 52%, on the basis of further industrialization of building, the wide use of compound materials and details, completing in a general way complex mechanization of work on construction, serious improvement in the organization of labor and cutting down the expenditures of labor on subsidiary work. Fulfillment of this task will allow a reduction of the overhead expenses in housing construction by 2.6% of direct expenditures and the total cost of building and assembling work by 2%.

Reducing the number of workers required on construction, and shortening the length of time of construction, as well as a wide use of large-size blocks and wall panels also promote the lowering of actual expenditures for temporary buildings and structures. Lowering of these expenditures by 10 to 15% would permit reducing the cost of construction of dwellings by 0.3 to 0.4%. The practice of building temporary roads and networks of water-pipes and electric circuits, because of delaying projects for permanent arrangements, should be eliminated. Construction should be started by building permanent roads, by laying permanent engineering networks and by erecting permanent fencing. The provisional structures needed for construction should be replaced by prefabricated collapsible ones.

The wide-spread development of construction with large panels and blocks will promote a reduction of expenditures of building organizations connected with the specific conditions of work during winter time. By lowering expenditures on work during winter time, the cost of housing could be reduced by 1960 an average of 0.1 to 0.15%.

One of the types of expenditures for servicing construction are expenses for the upkeep of technical supervising personnel. The basic means of reducing actual expenses on the upkeep of technical supervision is shortening the time and improving the quality of construction.

As a whole, the cost of housing could be reduced by 1960 as the result of lowering the enumerated expenditures on servicing and overhead expenses by 2 to 2.5%.

Thus improvement of organization, and the mechanization of construction processes in housing will allow us to lower its cost in 1960 by another 5 to 6%, compared with the estimated cost. Here we do not consider the possible lowering to the actual cost of housing by no less than 0.5 to 1% because of raising the quality of materials, details, build-

ing and assembling work and better utilization of equipment.

Aside from this, in our opinion, certain measures have to be taken in the field of planning and accounting in construction, which are essential preconditions for the realization of reserves for lowering the cost of housing. With the existing method of accounting labor productivity in construction by the gross output per worker and determining the estimated cost of construction according to individual rates, the use of lightened and less expensive construction materials will lead to a deterioration of the indices of work of building organizations, a lowering of the absolute level of overhead expenses and, possibly, to a lowering of the actual earnings of the engineers and technicians, as the result of lowering the rate of bonuses. The danger of weakening the stimulation for more rational work methods arises.

Similar considerations should apply to the manufacturing of building-materials and articles in plants, factories and proving grounds. The acting system of planning and control over the fulfillment of the planned output of compound ferro-concrete construction in cubic meters does not stimulate the output of effective construction using a lesser expenditure of concrete. Objectively the enterprises are interested in manufacturing heavy, solid material, rather than light, hollow material of similar durability. It is more correct to plan and take stock of concrete and ferro-concrete products in so-called "consumer's units:" in square meters — the floorings and plates, in linear meters. Selling prices for articles should be set in accordance with such "consumer's units." In particular, it would be better to express the selling prices for blocks and panels for the outer and inner walls, not per cubic meter, but per square meter of walls of corresponding thickness and durability.

The realization of the measures discussed in this article for more economy in the projected designs of dwellings and complexes of living quarters for improving the production of building-materials and articles, for the improved organization and fulfillment of building-assembling work — will promote a reduction in the cost of housing construction. In sum total, it will allow us to reduce the cost of housing in 1960 compared with the level prevailing at the beginning of the current Five-Year Plan, by 23 to 27%. This total includes: more economical dwelling designs and living quarters complexes — 10 to 12%; reducing selling prices of building-materials and details manufactured at plants and proving grounds, on the basis of lowering the manufacturing cost, mastering mass-production and using new effective construction units and materials — 8%; and, finally, lowering the cost of building and assembling work — 5 to 7%.

But one has to keep in mind that the improvement of equipment and comforts of apartments and living quarters, and raising the proportion of stone buildings in total housing will require additional expenditures. Thus, if we take into consideration these additional expenditures, the task of reducing the cost of housing no less than 20% i.e. to the amount set by the directives of the 20th Congress of the CPSU for the Sixth Five-Year Plan is quite attainable. Under the new conditions of management of industry and construction all possibilities exist for solving this important task.

The Development of Agriculture in the European People's Democracies

(Statistical materials)*

PEOPLE's REPUBLIC OF ALBANIA

1957 was a year of considerable success in strengthening agriculture in this country. Gross agricultural production increased by 84%, compared with 1938; of this the production of grain increased by 96%.

Particularly great successes were achieved in the field of peasant production crops: in 1957 more cooperatives were founded than in all the post-war years. (See table 1; tables appear on pp. 81-90.)

In Albania agricultural producing cooperatives of the higher type, where income is distributed according to work, predominate. In recent years, mostly in the mountainous regions, collectives (of types I and II), which are the simplest forms of peasants' cooperatives, began forming.

In 1957 the cooperatives tilled 58% of the sown area of the country; by the end of the second Five-Year Plan they will till about 70% of all the sown area.

The agricultural cooperatives gather better harvests than the individual farms. (See table 2)

Favorable climatic conditions and widely used advanced agricultural techniques made it possible to collect a rich harvest of grain and technical crops in 1957: the harvest was 14% greater than in 1956 for bread grain; 85% greater for cotton; 59% greater for sugar beet, and double for olives.

In 1957 there were 22 machine-tractor stations in Albania 2,000 tractors, 140 combines and many other agricultural machines were in operation. The volume of mechanized work (converted to light ploughing) in 1957 amounted to 535,000 hectares. During the Second Five-Year Plan (1956-1960) in the zones where machine-tractor stations operate 80% of the ploughing and 60% of the autumn sowing will be mechanized.

A considerable role in the development of agriculture and the supply of agricultural products is played by the state enterprises. At present there are 22 state agricultural and stock-breeding farms in Albania. The state farms of Albania completely meet the requirements of agriculture for sugar beet seeds, bread and pedigree cattle. They also provide olive and citrus produce.

During 1957 22,500 hectares of new lands, i.e. 30% more than in 1956 were opened up. (See table 3)

Stock breeding occupies an important place in agriculture. In number of animals per capita Albania is ahead of her neighboring countries — Italy, Greece and Yugoslavia. At present the main attention is being paid to improving the breed of animals, especially of cows and sheep. According to the plan the cooperatives must have 45-50 milkers from every 100 head of cattle by 1960.

Olives and citrus produce play an important role in Albanian agriculture. During the years of people's power the number of citrus trees increased by 123,000. During 1957

* Compiled on the basis of information of the Central Statistical Administrations of European people's democracies, materials of statistical handbooks and data of periodicals of those countries. A number of data were calculated in the sector on the economics of people's democracies of the Institute of Economics, USSR Academy of Sciences.

one 570,000 olive trees were planted. By the end of 1965 lbania will have 6,350,000 olive trees, i.e. almost five mes more than the number of olive trees before the libera-on of the country.

The state is rendering extensive help to the agricultural ooperatives. During the First Five-Year Plan (1951-1955) gricultural cooperatives and individual farmers received redit to the amount of one billion leks, while in 1956 alone ey received 535 million leks. During the First Five-Year lan capital investment in agriculture amounted to 2.3 illion leks, i.e. 15% of all capital investment in the econ-my; during the Second Five-Year Plan the total will be 4 illion, i.e. 18.3%. Agriculture will face sizeable tasks dur-g the Second Five-Year Plan. It is expected that the gross arvest of bread grain in 1960 will be 46% higher than in 955. By the end of the Second Five-Year Plan agriculture ill be able to meet completely the bread requirements of e population.

The construction of irrigation and draining canals is of reat importance for Albanian agriculture. During the last vo years alone 40,000 hectares of new lands were har-essed. Large-scale meliorative works are being carried n in the plains of Muzekie, Zadrima, Mourci and Toumani. y 1960 some 125,000 hectares of land will be irrigated.

EOPLE'S REPUBLIC OF BULGARIA

In the People's Republic of Bulgaria the socialist re-. rganization of agriculture is completed.

In Bulgaria a form of producing cooperatives — coopera-ve agricultural enterprises, based on joint cultivation — s developing. (TKZKh)

By the end of 1957 there were in Bulgaria 3202 such gricultural cooperatives. By March, 1958 such coopera-ves were cultivating 90% of the total arable land of the ountry and included 91% of all farms. In 1956 the value of e basic means of production of TKZKh was 169,000 levs er 100 hectares of cultivated land against 96,000 levs in 951. Harvests in these cooperatives are considerably igher than in individual farms. In 1956 the wheat crop of KZKh farms was 30.5% higher than individual farms, corn as 43% higher, and sunflowers 51% higher. (See table 4)

uring the period 1951-1955 the average annual capacity of e basic crops on TKZKh per hectare amounted to: wheat — 5.2 centners; corn — 15.8 centners, barley — 20.3 cent-ers; sun-flowers — 10.4 centners; oriental tobacco — 6.5 entners; sugar beets — 141.8 centners; cotton — 4.8 cent-ers; tomatoes — 239 centners. In 1957 the average crop apacity of wheat at the TKZKh was 17.1 centners per hec-are; corn — 21.7 centners; sunflowers — 11.5 centners; ugar beets — 208.5 centners.

Stock breeding productivity is also increasing on co-perative farms (TKZKh). (See table 5)

As the result of the growth of labor productivity on KZKh the volume of agricultural production per 100 hec-ares of cultivated land is increasing. Thus the harvest of rain increased from 788.1 centners in 1950 to 1,043.7 entners in 1955; sunflowers from 44.1 to 67.7 centners; riental tobacco from 3.8 to 4.9 centners, sugar-beets — rom 112.7 to 200.7 centners. The income of cooperative arm members is increasing. (See table 6)

In distribution of income in the TKZKh the socialist prin-iple of payment according to the work performed is being ncreasingly applied. In 1952, as an average for the country 0% of the net income of TKZKh was distributed according o the share of land; in 1953 — 15%; in 1954 — 11% and in 956 — 9.5%.

The cooperative farms are playing an ever-growing role in supplying the country with agricultural products. In 1957 their share in total production was: 84% of wheat; 72% of corn; 97% of sugar beets; 94% of cotton and 88% of sun-flowers.

In 1957 Bulgaria had 50 GZKh (state farms) with 200,000 hectares of land. In 1957 these state enterprises harvested per hectare (average) 23.5 centners of wheat, 22.6 centners of barley, 22.2 centners of corn.

From 1948 to 1956 the number of cattle in the GZKh in-creased five times, and pigs and poultry nine times.

In 1956 three-quarters of the total gross production and 90% of production for the market came from the socialist sector of agriculture. In 1957 87% of the total agricultural production of the country came from the socialist sector.*

The people's democratic state is paying considerable at-tention to the creation of a material-technical base for so-cialism in agriculture, mainly by organizing a network of machine-tractor stations. (See table 7)

In 1939 there were on the average 2,400 hectares of cul-tivated land per tractor (of 15 hp); in 1957 — 190 hectares. The volume of work performed by MTS increased from 603,700 hectares of soft ploughing in 1948 to 9,301,100 hec-tares in 1956. The total volume of work performed by the MTS in 1957 was 19% higher than in 1956. In 1956 agricul-tural work in the TKZKh was mechanized as follows: deep ploughing — 99.9%; sowing — 75% and grain harvesting — 44.4%.

Success in the reorganization of agriculture and raising its technical level were the decisive factors in the growth of agricultural production as a whole. (See table 8)

In 1953-1957 the average annual wheat yield was 13.5% higher than in 1949-1952; corn — 51.9%; sunflowers — 29.3%; oriental tobacco — 11.9%; sugar beets — 31% and cotton — 27.5%. (See tables 9, 10, 11)

During recent years the Communist Party and the Govern-ment of People's Bulgaria have taken a number of important measures for improving agricultural planning, the system of state purchases of agricultural products and for raising the material personal interest of peasants in the growth of production. The obligation to supply grapes, apples, plums, potatoes, oats, hay and milk was abolished as of January 1st 1957, according to the decision of the Council of Ministers of the People's Republic of Bulgaria and the CC of the Bulgarian Communist Party. Peasants of a number of regions, where the production of cereals is de-veloped poorly, have been released from the obligation to supply grain.

HUNGARIAN PEOPLE'S REPUBLIC

Agriculture plays an important role in the economy of Hungary. At the beginning of 1956 agriculture occupied some 44% of the gainfully employed. In 1955 the share of agriculture in the national income amounted to 30.1% (in 1954 prices).

During the years of people's power agriculture in Hun-gary achieved success in various fields. The socio-eco-nomic structure of the Hungarian village was drastically changed. The socialist sector is developing and strength-ening. (See table 12)

The producing cooperative system was started in Hungary in 1948 when the first 30 cooperatives were organized. By the end of 1950 2,158 producing coopera-tives and groups were in operation, and by September 1956 their number reached 4,858. In 1956 more than 2,500 co-

* Including agricultural production on the personal plots of the farmers — members of the TKZKh.

operatives were dissolved, as a result of the October-November counter-revolutionary mutiny. But as of November 1957 more than half of them were restored. According to the data of December 31, 1957 there were 3,394 producing cooperatives and cooperative groups with 155,794 members in Hungary. By the end of 1957 the cooperative sector had 11.6% of the total cultivated area and the state sector — 14.4%. (See table 13)

In 1957 the harvest of wheat on the cooperative farms was higher than on the individual farms by 2.1 centners per hold; of rye — by 1.8 centners; of winter barley — 0.9 centners.

There are about 500 state farms in the country. In 1956 they occupied 13.2% of the total cultivated land. The number of tractors on the state farms increased from 618 in 1949 to 6,888 in 1957.

In 1957 the yield of wheat on state farms was higher than at the individual farms by 3.9 centners per hold, of rye — by 2.5 centners, of winter barley — 1.9 centners.

The MTS are playing an important role in the development of agriculture and its socialist reorganization. (See table 14)

The volume of MTS work increased from 3,449 thousand holds of conventional ploughing in 1950 to 11,113 thousand holds in 1956, i.e. by 3.2 times. In 1955 the ploughing was 93-98% mechanized in the state farms and cooperative farms, the harvesting 65-70% and sowing 83%.

The area of irrigated lands is increasing. In 1955 the irrigated area amounted to 159,000 holds, i.e. 3.3 times more than in 1949.

In 1957 the plan of agricultural production was overfulfilled by almost 4.8%; of this total, plant cultivation by 4.5% and animal breeding by 5.2%.

In 1957 the harvest of bread grain was 5% higher than the level of 1956, in spite of reducing the sown area under cereals (by 10%). (See tables 15 and 16)

In 1956 the harvest of some crops was somewhat lower than usual, as the result of unfavorable climatic conditions. (See table 17)

In October, 1956 the system of obligatory supply of agricultural products was abolished. In 1957 one million sixty thousand tons of bread grain was purchased by the state.

By the end of 1957 a three year plan of development of producing cooperatives was worked out (1958-1960). This plan provides for the conversion of the agricultural producing cooperatives into model farms. The crop capacity of the most important agricultural crops must, according to the plan, surpass in 1960 the average indices of 1954-1956 by 20-40%. Considerable development of stock breeding is provided for. Incomes of the members of producing cooperatives will increase during that period by 36%.

GERMAN DEMOCRATIC REPUBLIC

By the end of 1957 the socialist sector in agriculture embraced one-third of the total agricultural area of the Republic. (See table 18)

Beginning in the middle of 1952 the working peasants of the GDR started forming agricultural producing cooperatives. Their role is increasing every year. (See table 19).

During the entire year 1957 the number of cooperatives in the Republic increased by 410; during the first quarter of 1958 peasants formed 675 new cooperatives. By the end of 1958 there were 7,366 such cooperatives, which cultivated 1,789,000 hectares or 27.7% of the total useful agricultural area of the Republic.

The share of farms united in cooperatives increased from 7% in 1953 to 12% in 1956 of the total number of peasants' holdings of 0.5 hectares and more of useful agricultural land.

Producing cooperatives achieved considerable success in the growth of agricultural production. The crop capacity of potatoes in the cooperatives increased in 1957, compared with 1956, by 13% (on individual farms — by 5%), sugar beets — by 43% (on individual farms — by 31%). During 1957 commodity production of pork, calculated per hectare of useful agricultural land, increased on cooperatives by 30%; of beef (cattle) — by 39.5%; of milk — by 20%; while on individual farms only by 1.4 and 8%. If the output of grain on individual farms amounted to an average of 30 centners per worker, on cooperatives it reached 53 centners.

In 1957 about 10,000 permanent peasants' associations for joint field work existed in the GDR. These associations are the lowest form of organization of joint peasants' work.

The MTS play an important role in the reorganization of agriculture. In 1956 there were 602 such stations. During the First Five-Year Plan (1951-1955) the MTS received 25,878 tractors (in 30 hp), 1500 tractor-binders, 28,000 tractor-ploughs and more than 2,000 grain combines. (See table 20)

The total volume of work of the MTS amounted to 18.9 million hectares of conventional ploughing in 1957, i.e. 17% more than in 1956. The cost of the MTS work per hectare of conventional ploughing decreased in 1957 by 6%, compared with 1956. The machine fleet of the MTS mechanized 50% of the field work; the figure in the cooperative sector reached more than 80%.

In 1956 in the GDR there were 555 people's estates, which are state agricultural enterprises. The share of people's estates in the useful agricultural area increased from 2.7% in 1950 to 4.4% in 1956.

From 1950 to 1956 the number of cattle on the people's estates doubled (cows increased 2.6 times); pigs six times; and sheep 1.7 times.

In 1956 there were, aside from people's estates 14,311 other agricultural enterprises subordinated to local organs of government; they occupied 3.4% of the total useful agricultural area.

The successes in the socialist reorganization of agriculture promoted the development of the total agricultural production. (See table 21)

The average yield of cereals during 1951-1955 was 20% higher than the average for 1934-1938. By 1960 it must reach 26 centners per hectare for grains, 200 centners for potatoes and 320 centners for sugar beets.*

The extensive use of mineral fertilizers plays an important role in securing high yields in agriculture.

In 1950 the gross harvesting of basic agricultural crops in the GDR amounted to, and partly surpassed the average harvest of 1934-1938. The average annual harvest of sugar beets and potatoes during the First Five-Year Plan increased considerably. (See table 22)

In 1957, compared with 1956, the output of grains increased by 1%, and that of sugar beets — by 50%.

Considerable successes were achieved in the GDR in the development of stock breeding. (See tables 21 and 24)

The average milk yield (fat content — 3.5%) during 1951-1955 increased by 26.7%, and reached 2,450 kilograms in 1955. The average wool-clip per sheep increased by 48.1%, the output of eggs increased by 15.2%. It has to be noted that during 1951-1955 the tempo of increase in the production of meat and milk in the GDR was higher than in the FRG. In 1955 the production of meat in the GDR increased by 87% compared with 1950 (of this, the production of pork by 106% and of beef by 43%); the output of milk (3.2% fat) increased by 65%.

* Without losses during harvesting.

In 1957 as a whole gross agricultural output increased y 11% compared with 1956, while in the socialist sector it ncreased by 17%.

OLISH PEOPLE'S REPUBLIC

Poland's agriculture, in spite of the enormous damage inicted by the fascist invaders during the Second World War, s developing successfully. During the years of the people's emocratic regime the socio-economic structure of agriulture has changed; in the villages the socialist sector apeared.

During 1948-1949 in People's Poland producing cooperaion among peasants began. In early 1958 more than 2,000 gricultural producing cooperatives were in existence in ne country. They are clearly demonstrating to the toiling easants the advantages of large-scale socialist collective roduction over small-scale individual farms.

The growth of social income of the cooperatives and peronal income of their members bears testimony to the inreasing strength of agricultural cooperatives. The total ncome per family in cooperatives amounted to 8,057 zloty n 1955, and 12,580 zloty in 1956. According to preliminary ata, in 1957 every cooperative member received on the verage per working day 20-30 zloty in money, 4-6 kilorams of grain and also other products.

In 1957 there were about 400 machine-tractor stations vith 20,500 tractors (in standard units). The MTS serve the ndividual farms along with the agricultural producing coperatives.

The state agricultural enterprises are playing an imortant role in the socialist reorganization of agriculture n Poland. In June 1957 there were 6,055 state agricultural nterprises with almost two million hectares of cultivated and.

The development of agriculture in Poland is characterzed, as a whole, by the data in tables 25 and 26.

In 1957 the harvest for the whole country was the largest or all the post-war years. (See table 27)

The gross harvest in 1957 amounted to: grain — 13.6 nillion tons; sugar beets — 7.6 million tons; potatoes — 35 nillion tons. The gross output of agriculture in Poland inreased in 1957 by almost 4%, compared with 1956; of this otal, the stock breeding increased by almost 6%, and that f plant cultivation by 2.5%. (See table 28)

During recent years the livestock, cattle, sheep and pigs ave increased. (See table 29)

In 1957 the livestock data in Poland was as follows: cattle - 8.3 million heads (of which 5.8 million was cows); pigs - 12.3 million; sheep — 4 million; horses — 2.6 million.

The real income of the rural population is increasing very year: in 1955 it amounted to 56.7 billion zloty, in 956 — 65 billion and in 1957 — 69 billion.

The Five-Year Plan of development of the national econmy of Poland for 1956-1960 provides for an increase in gricultural production of 25%, of which plant growing has o increase by 22% and stock-breeding by 27%. The plan or 1958 contemplates raising the value of gross agriculural production by 3.9%, compared with 1957, of which lant growing production will increase by 3.1% and that of tock breeding by 5.6%.

UMANIAN PEOPLE'S REPUBLIC

The realization of the program of socialist reorganizaion of the country led to the development and strengthening f the socialist sector of agriculture in the Rumanian Peole's Republic. By the end of 1957 the socialist sector emraced 48% of the total arable area.

The collective rural economies in Rumania are the highest type of producing cooperatives. Their land and basic means of production are socialized, and the incomes are distributed according to the labor performed. The lowest type of cooperative peasant associations distribute incomes in proportion to land allotments.

Aside from the collective rural economies and agricultural associations, by the autumn of 1956 a new intermediary type of cooperative — agricultural producing cooperative — was developing in Rumania. In these cooperatives about 25% of all incomes are distributed according to the size of the land allotment and the other 75% according to the labor performed. The number of such cooperatives is growing more rapidly in regions with a high percentage of middle peasant farms. By March 1st there were 125 such cooperatives, joining about 5,300 peasants families. (See table 30)

The beginning of 1958 saw a new upsurge in the cooperative movement; the arable area of the cooperative sector increased during the first two months of this year by 470,000 hectares. (See table 31)

In 1957 the collective farms alone produced 958,000 tons of grain, i.e. 9.6% of the total output of grain in the country. Cooperative enterprises gathered 300-400 kilograms of grain per hectare more than the individual farms.

The state agricultural enterprises — state farms — play an important role in the socialist reorganization of agriculture. In 1956 there were 323 state farms which possessed 8.3% of the arable area of the country.

In 1957 the arable area belonging to the state farms increased by 30% or 920,000 hectares. In 1960 the arable area of the state farms will be more than one billion hectares, and of this 400,000 hectares will be corn, while 350,000 hectares — wheat and rye. (See table 32)

Considerable success was achieved in the mechanization of agriculture. (See table 33)

In 1958 agriculture will receive an additional 6,000 tractors together with more than 3,600 tractor ploughs, 4,000 self-propelled combines, 3,000 corn-seeders, etc. In 1956 the MTS machines performed 82.4% of all ploughing at the collective farms.

The successes in the socialist reorganization of agriculture and its mechanization led to an increase in the volume of agricultural production. (See table 34)

Beginning January 1st, 1957 the system of obligatory deliveries to the state by cooperative and individual farms of wheat, rye, corn and other cereals, as well as sunflowers, potatoes, hay, and cow and sheep milk was abolished in Rumania. At present the principal sources of accumulation of state funds of agricultural products are contracting and purchasing and the production of the state sector of agriculture.

REPUBLIC OF CZECHOSLOVAKIA

In developing cooperatives in Czechoslovakia four types of united agricultural cooperatives (UAC) were formed. They differ in degree of socialization. UAC of types I and II are the simplest cooperatives, associations for the joint cultivation of land; UAC of types III and IV are cooperative economies of a higher form, where not only labor, but also the most important means of production are socialized. UAC of type I, which played their role during the period of development of production cooperation, now are no longer organized. (See table 35)

In 1957 the cooperative movement was developing at a particularly rapid tempo. During that year 3,074 UAC of types III and IV were formed. By the end of 1957 the total number of UAC of higher types amounted to 11,090. At

that time the share of the UAC of higher types was 61% of all the arable land, compared with 10.5% in 1950 (without the state farms). In April, 1958 the socialist sector of agriculture occupied 70% of the total agricultural area. (See table 36)

In 1957 the yields in the UAC of types III and IV was higher than the individual farms: wheat by 2.6 centner per hectare; rye 1.1 centners; barley 2.6 centners; sugar beets 22.9 centners; flax 2.5 centners and corn 3 centner per hectare.

With the expansion of cultivated land of the UAC the number of livestock in the socialized economy is increasing. (See table 37)

The value of gross output of the UAC in 1956 amounted to an average for the entire country of 3,760 koruny (calculated per hectare of arable land). Incomes of the agricultural producing cooperatives and their members are growing.

On the basis of the growth of incomes of the UAC payment per working-day is rising. In 1953 at the UAC of types III and IV for every working day 11.9 koruny (as an average for the whole country) were paid; in 1954 — 13 koruny; in 1955 — 15 koruny; in 1956 — 15.9 koruny in money and 5-6 koruny in kind.

State farms are playing an important role in Czechoslovakia agriculture. By the end of 1956 they cultivated 12.3% of the total agricultural and 13% of the arable land.

As a rule, at the UAC farms harvests are higher than at individual farms. For instance, in 1956 the crop capacity of wheat at the state farms was 23.3 centners per hectare, while the average for the Republic was 21.3 centner per hectare. The crop capacity of potatoes at the state farms still is lower than at individual farms.

State farms play an important role in supplying the urban population with foodstuffs and industry with raw materials. Thus, in 1956 state farms supplied 16.8% of the government's supply of wheat, 26.9% of olives; 13.4% of sugar beets; 22.4% of pork; and 13.6% of milk.

Considerable success in the mechanization of Czechoslovakian agriculture was achieved. During 1947-1957 agriculture received 47,995 tractors and thousands of other agricultural machines. In 1937 in Czechoslovakia there were 1.5 tractor per 1,000 hectares of arable land, in 1948 — 3.2 tractors and in 1957 — 6 tractors (converted into 15hp).

By the end of 1956 there were 257 machine-tractor stations with 28,157 tractors (in 15 hp), 3,153 grain combines and 1,208 beet-harvesters, 9,675 tractor-seeding machines and 9,898 binders.

Growth of total production of the MTS*
(in thousands of hectares)

1950	2,141.6	1956	9,471.0
1953	6,294.6	1957	11,400.0

* Including threshing (without transportation).

The development of socialist forms of economy led to the growth of the gross output of Czechoslovakian agriculture. In 1955 the total volume of agricultural production increased by 11.5% compared with the previous year, and in 1956 by 3.4% compared with 1955.

In 1957 the volume of gross output of agriculture remained in general at the 1956 level. This was the result, first of all, of the reduction of gross production of plant growing in 1957 by 4% compared with 1956. The output of stock-bredding for the same period increased by 2.9%.

The crop capacity of the principal crops is higher now than in the pre-war period. (See table 38)

The utilization of mineral fertilizers in agriculture increased on a big scale. During 1935-1936 as an average for the country 10.7 kilograms of fertilizers were used per hectare; in 1945-1946 — only 6.4 kilograms; while in 1957-1958 53.5 kilograms per hectare were used, of which 116.7 kg at the UAC. (See table 39)

Stock breeding in Czechoslovakia has attained a high intensity. In 1956 in the US 28.2 kilograms of meat per hectare was produced; in Czechoslovakia, 68.1 kilogram of meat; milk correspondingly — 128 kg. and 510 litres. But in per capita production Czechoslovakia still is behind the US. In 1956 the US produced, per capita: 73.4 kg of meat and 343 kg of milk, while in Czechoslovakia — 38.3 kilogram of meat and 280 litres of milk.

State acquisition of agricultural produce in Czechoslovakia are realized through contracting, compulsory deliveries and state purchases.

In 1957 the UAC farms of the higher types fulfilled the norm of compulsory deliveries better than the individual farmers. The plan of deliveries for grain was overfulfilled by the UAC by 5%; for potatoes by 19%; for livestock by 8.4%. At the same time the individual sector fulfilled the plan for delivery of grain only by 99%; for potatoes by 102% and for livestock only by 92%. Thus, the supply of towns with foodstuffs and industry with raw materials is being realized to a growing degree by the prdducts of the UAC.

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The socialist reorganization of agriculture had a favorable influence on the development of all branches of agricultural production of the European People's democracies.

Sector on the Economics of the People's Democracies, Institute of Economics, USSR Academy of Sciences

TABLES

Development of production cooperative system in agriculture

Table 1

	1946	1950	1955	1956 (May)	1956 (December)	1957 (December)
Number of cooperatives	7	90	318	694	881	1,700
Number of economies in cooperatives	221	4,517	15,313	29,478	37,267	
% of total peasant economies		3	9.8	18.9	24.3	46.4

Yields in cooperative and individual sectors (in centners per hectare)

Table 2

	1951		1955		1956	
	cooperative sector	individual sector	cooperative sector	individual sector	cooperative sector	individual sector
wheat	9.4	9.4	12.9	10.0	11.9	9.5
corn	9.6	9.4	16.5	14.3	11.6	10.4
cotton	6.2	4.5	9.1	5.8		
sugar beets	176.0	134.3	240.8	118.0	114.5	44.3

Extension of crop area and its structure (in thousands of hectares)

Table 3

	1938	1946	1950	1955	1960 (plan)	1960 in % of 1955
total area sown	221	263	330	375	445	119
of the above: grains	213	250	269	305	358	117
technical crops	3	4	31	38	46	119
fodders	1	3	18	16	25	156

Dynamics of development of the TKZKh

Table 4

	1948	1950	1953	1954	1955	1956	1957 (1)
Number of TKZKh	1,100	2,501	2,744	2,723	2,735	3,100	3,158
Number of farms in TKZKh (in thousands)	124	502	569	570	591	911	996
Area of land cultivated by TKZKh (in % of total cultivated land of the country)	7.2	51.1	61.1	61.3	62.5	77.4	86.5

(1) For 9/11/1957.

Stock breeding productivity on TKZKh

Table 5

	1950	1953	1955	1956	1957
Amount of milk per cow (in litres)	572	666	1,031	1,183	1,514
wool clip per sheep (in kilograms)	2.0	2.1	2.2	2.3	
number of suckling pigs per sow	8.9	9.8	9.7	13.5	

Growth of income of members of cooperatives
(in levs)

Table 6

	1953	1955	1956	1957
income in kind and money per able-bodied member of TKZKh	2,501	3,059	2,841	4,042
payment per working day in kind and money (average)	10.4	12.7	13.1	17.5

Technical equipment of agriculture

Table 7

	1948	1950	1955	1956	1957
total number of tractors in agriculture (in 15 HP)	5,231[2]	8,657	19,411	24,283	over 27,000
Combines		13	3,109	4,118	4,318
Threshing machines	5,094	5,718	5,041	4,943	4,800
number of MTS	71	95	167	184	200
number of tractors in MTS (in 15 HP)	3,633	6,803	15,998	20,427	

(2) Physical units.

Yields of the basic agricultural crops
(in centners per hectare)

Table 8	1939	1953	1954	1955	1956	1957
wheat	13.1	16.4	11.8	14.0	12.5	16.4
corn	13.6	13.8	13.4	19.4	13.3	10.1
sunflowers	9.6	9.9	10.4	12.3	9.8	11.1
oriental tobacco	9.6	5.2	5.3	7.7	6.1	8.1
sugar beets	176.7	161.1	133.9	133.3	183.9	228.0
tomatoes	204.9	280.4	231.1	220.5	282.2	240.8

Table 9
Value of gross agricultural production (in billion levs)(3)

1939	1948	1950	1953	1954	1955	1956	1957
11.9	12.2	10.1	14.3	12.4	13.7	12.8	14.8

(3) In comparable prices.

Gross harvest of agricultural crops
(in thousands of tons)

Table 10	1939	1948	1951	1952	1953	1955	1956	1957
wheat	2,003	1,688	2,499	2,041	2,334	1,921	1,717	2,375
corn	1,077	802	1,279	487	961	1,477	1,056	1,461
sunflowers	171	166	258	184	223	253	193	208
tobacco	41	28	58	41	52	66	51	73
sugar beets	234	560	839	381	782	596	943	1,464
tomatoes	44	95	200	215	303	221	372	362
apples	76	279	84	209	167	110	313	
plums	248	198	83	80	191	56	68	
grapes	659	473	606	394	492	513	399	570

Livestock (in thousands of heads)

Table 11	1939[4]	1957[5]		1939[4]	1957[5]
cattle (including cows)	1,532 545	1,529 564	sheep goats	10,262 596	7,596 617
buffalo of these female	329 172	243 128	pigs poultry	807	1,468 14,117

(4) By August 1st.
(5) By January 1st.

Share of different sectors in cultivated land

Table 12

	state enterprises and farms		enterprises under village soviets		agriculture productive coops.		cooperat. groups		individual farms	
	thous. of holds (1)	in % of total	thous. of holds	in % of total	thous. of holds	in % of total	thous. of holds	in % of total	thous. of holds	in % of total
1954 (June 30)	1,257	13.3	137	1.4	1,419	14.9	294	3.1	6,393	67.3
1955 (June 30)	1,229	13.1	137	1.5	1,354	14.4	286	3.0	6,383	68.0
1956 (May 31)	1,241	13.2	110	1.2	1,859	19.8	224	2.4	5,941	63.4

(1) One hold is equal to 0.575 hectares.

Development of agricultural producing cooperatives

Table 13

	Number of producing coops.	Number of members in them	Number of families	Area belonging to them (in thousands of holds)
Agricultural producing cooperatives and groups				
1950 (Dec.1)	2,185	119,527	76,887	771.6
1955 (Dec.31)	4,816	305,501	244,953	2,281.9
1956 (Sept.30)	4,858	342,884	272,741	2,507.6
1956 (Dec.31)	2,089	119,315	97,897	1,038.2
in the above number cooperatives of highest type				
1950 (Dec.1)	2,149	118,206	76,107	764.5
1955 (Dec.31)	3,759	253,355	197,028	1,983.2
1956 (Sept.30)	3,907	292,837	228,150	2,232.2
1957 (Dec.31)	1,617	96,126	76,513	904.9

Number of MTS and their fleet of machines

Table 14

	1949	1950	1953	1955	1956 6/30	1957 6/30
number of MTS	221	361	364	312	287	
number of MTS agricultural machines:						
tractor cultivators	3,455	6,681	10,661	12,485	13,155	13,236
combines		3	785	1,229	1,500[2]	1,450

(2) According to data of July 20th.

The gross harvest of the most important crops
(in thousands of tons)

Table 15	1931-1940 average annual harvest	1950-1954 average annual harvest	1956	1956	1957[3]
wheat	2,196	1,996	2,131	1,845	1,959
rye	712	629	544	494	487
barley	628	648	794	644	969
corn	2,185	2,192	2,912	2,034	3,284

(3) Preliminary data.

Yields of basic crops (in centners per hold)

Table 16	1931-1940 annual average	1950-1954 annual average	1955	1956	1957
wheat	7.9	8.4	9.0	7.6	9.0
rye	6.5	7.0	7.0	6.4	6.7
barley	7.8	8.5	11.3	9.1	11.6
oats	7.1	6.5	8.4	8.6	8.8
corn	10.8	11.0	13.0	10.1	14.0
potatoes	39.5	42.7	61.7	53.8	
sugar beets	117.0	102.0	114.0	97.0	

rowth of livestock (in thousands of heads; as of March 1st)

Table 17	1935	1955	1956	1957[4]
cattle	1,911	2,128	2,170	1,973
of the above cows	961	859	891	891
pigs	4,674	5,818	6,056	4,996
of the above sows	602	572	479	403
horses	886	711	729	720
sheep	1,450	1,857	1,930	1,873

(4) Preliminary data.

Share of different sectors in the useful agricultural area

Table 18	1950	1955	1956
socialist sector	5.5	27.2	30.4
petty goods economy sector	69.9	59.5	57.5
capitalist sector[1]	24.6	13.3	12.1
total	100.0	100.0	100.0

(1) Including lands belonging to the churches, which occupy 0.2% of the total useful agricultural land.

Development of agricultural producing cooperatives
(end of year)

Table 19	1952	1954	1956	1957
number of cooperatives	1,906	5,120	6,281	6,691
number of members in the cooperatives (thousands)	37.0	158.4	219.6	229.0
agricultural useful area of the cooperatives (in thousands of hectares)	218.0	931.4	1,500.7	1,631.9

Fleet of MTS machines (end of the year)

Table 20	1950	1953	1955	1956	1957
tractors (in units)	10,834	23,042	31,531	33,866	34,617
tractors (in 30 HP)	11,668	28,686	37,546	39,415	
trucks	675	1,830	2,859	3,069	
tractor seeders	820	4,029	6,545	8,476	
grain combines		475	2,115	3,296	3,702
potato diggers	989	3,689	8,259	9,259	
of the above potato combines			170	899	1,641
beetroot lifters and pullers	434	1,078	3,205	3,492	
of the above combines		113	261	274	479

Size of basic crops (in centners per hectare)(2)

Table 21	all grain	types		grain for fodder	legumi-nous	olive (non-fibrous	potatoes	sugar beets
		wheat	rye					
1934-1938	20.6	24.6	17.1	21.9	13.6	14.6	173.0	291.0
1950	20.7	25.4	18.7	21.2	12.1	10.7	181.2	273.1
1955	26.4	31.8	22.9	27.9	14.2	15.6	143.6	286.1
1956	25.2	30.3	21.9	27.1	13.3	13.9	189.7	242.6

(2) Including losses during harvesting.

Gross harvest of basic crops (in thousands of tons)(4)

Table 22	all grain	types				potatoes	sugar beets
		wheat	rye	barley	oats		
1950	5,635	1,214	2,418	587	1,127	14,706	5,754
1955	6,548	1,273	2,464	983	1,470	12,108	6,145
1956	6,148	1,151	2,434	898	1,214	14,841	4,864

(4) Including losses during harvesting.

Livestock (in thousands of heads by the end of the year)

Table 23	horses	cattle	of this, cows	pigs	sheep	goats	poultry
1936	815.5	3,604.6	1,960.4	6,189.5	1,589.6	692.5	21,960[5]
1946		2,767.3	1,368.5	1,968.7			
1950	722.9	3,614.7	1,616.4	5,704.8	1,085.3	1,628.1	22,725.6
1955	669.1	3,759.5	2,100.1	9,029.3	1,807.4	859.8	27,300.1
1956	641.4	3,718.5	2,115.0	8,325.6	1,892.8	764.2	28,732.2

(5) 1938.

vestock per 100 hectares useful agricultural area (By June 3rd)

Table 24	1950	1955	1956
rses	11.3	10.6	10.1
ttle	53.9	58.4	57.8
ows	23.3	32.1	32.7
gs	69.1	125.9	124.3
eep	17.1	30.4	31.2
ckens g-laying)		294.2	307.7

Structure of grain crops area (in thousands of hectares) (as of June)

Table 25	1949	1955	1956	1957
total area under grain	14,804.1	15,392.2	15,405.5	15,478.6
under four grain crops	9,226.4	8,846.1	8,798.7	9,022.1
wheat	1,445.0	1,431.4	1,464.0	1,441.0
rye	5,166.2	4,951.7	4,962.1	5,066.0
barley	840.7	821.8	777.3	777.4
oats	1,774.5	1,641.2	1,595.3	1,737.7
potatoes	2,538.3	2,702.4	2,716.8	2,763.3
sugar beets	260.8	391.6	364.2	338.5

Basic agricultural crops (in centners per hectare)

Table 26	4 grain crops[1]	wheat	rye	barley	oats	potatoes	sugar beets
1950-1955							
average for the country	12.6	12.9	12.3	13.2	12.9	118	187
of this: in individual enterprises	12.5	12.6	12.3	13.0	12.9	120	199
in producing cooperatives	13.6	14.4	12.9	15.0	13.3	94	158
in state farms	12.4	13.9	11.7	13.2	11.6	94	150
1956							
average for the country	13.7	14.5	13.2	14.6	14.2	140	177
of this: in individual enterprises	13.9	14.6	13.4	14.7	14.4	143	205
in cooperatives	13.7	14.9	18.4	15.5	14.4	135	118
in state farms	12.1	16.0	11.3	13.1	11.6	106	130
1957							
average for the country	15.0	16.1	14.7	15.8	14.7	127	225
of this: in individual enterprises	15.1	16.1	14.8	15.9	14.9	129	236
in cooperatives	17.1	18.5	16.2	18.7	16.8	119	197
in state farms	13.6	15.3	13.1	14.6	12.2	100	170

(1) Without admixtures.

Gross harvest of basic crops (in thousands of tons)

Table 27	4 grain crops[1]	wheat	rye	barley	oats	potatoes	sugar beets
1950-1955[2]							
total	11,230.9	1,937.6	6,040.2	1,105.4	2,147.7	30,902.1	6,502.5
of this: individual farms	9,425.9	1,476.9	5,306.8	810.8	1,831.4	27,629.3	5,070.3
cooperatives	649.0	164.4	260.1	94.8	129.7	637.4	547.3
state farms	1,054.7	271.3	434.0	182.9	166.5	1,255.2	810.9
1956							
total	12,069.4	2,120.9	6,557.7	1,131.5	2,259.3	38,051.8	6,427.9
of this: individual farms and cooperatives	10,773.6	1,805.3	6,027.5	911.6	2,029.2	35,006.9	5,633.6
state farms	1,145.0	281.8	470.2	193.8	199.2	1,630.0	732.2

(1) Without admixtures
(2) Average for the year.

Plant cultivation per capital of population (in kilograms)

Table 28	1938	1949	1955	1957
four grain crops[1]	387.9	487.5	464.2	434.0
of this:				
wheat	62.6	73.0	78.2	76.8
rye	209.1	276.9	256.7	235.3
potatoes	996.4	1,265.9	990.6	1,368.4
sugar beets	91.2	192.2	267.1	231.2

(1) Without admixtures.

Table 29

Livestock (in thousands of heads; as of June)

	cattle	of this: cows	pigs	sheep	horses
1950	7,200.0	4,850.0	9,350.0	2,198.5	2,800.0
1955	7,912.2	5,454.7	10,888.3	4,243.2	2,560.1
1956	8,353.2	5,599.6	11,560.6	4,223.0	2,544.2

Development of producing cooperation (beginning of year)(1)

Table 30	number of peasant farms united in cooperatives		arable area of the cooperative sector		agricultural area of cooperative sector	
	in thousands	in % of total farms	in thousands of hectares	in % of the total arable area	in thousands of hectares	in % of total agricultural area of the country[2]
1950	4.0	0.1	13.1	0.1	14.3	0.1
1953	255.4	7.9	851.3	10.2	901.0	8.2
1955	317.7	9.6	1,075.2	13.0	1,183.1	11.3
1956	389.5	11.5	1,179.8	14.2	1,301.2	12.4
1957	638.8	19.8	1,696.3	20.2	1,844.1	17.4
1958	1,462.0	42.0	3,361.0			

(1) The cooperative sector includes collective farms, producing cooperatives (with rent) and associations.
(2) Except the area of the state sector.

Production of grain in the collective farms and agricultural associations (in thousands of tons)

Table 31	1951	1953	1955
gross production:			
wheat and rye	117.3	545.2	526.9
corn	58.9	286.1	693.8
commodity output			
wheat and rye	10.7	330.8	268.8
corn	9.2	66.7	176.3

Production of grain in the state farms (in thousands of tons)

Table 32	1951	1952	1953	1954	1955	1957
wheat and rye	211.4	179.5	285.8	131.0	287.2	370.0[3]
corn	62.0	78.1	204.1	239.9	470.0	

(3) Delivered to the state.

Mechanization of agriculture

Table 33	1951	1953	1954	1955	1956	1957
total number of tractors in agriculture (in 15 HP)		23,256	27,108	30,488	32,160	37,000
number of MTS	188	220	221	222	235	240
number of tractors in MTS (15 HP)	10,891	13,513	15,156	17,646	18,788	20,744
work performed by MTS (in thousands of hectares)	2,311.4	3,141.9	3,179.1	4,115.8	4,472.3	5,453

Growth of the output of agricultural products (in thousands of tons)

Table 34	1938	1955	1957
wheat	3,755	3,006	4,095
corn	4,092	5,877	6,415
sugar beets	484	2,000	1,900
sunflowers	58	277.5	248
potatoes	1,331	2,608	2,750

Development of the UAC (by end of the year)

Table 35	number of UAC		number of members[1] in UAC		number of economies united in UAC	
	type II	types III and IV	type II	types III and IV	type II	types III and IV
1951	1,356	3,138	64,109	180,406	44,616	108,681
1953	671	6,679	31,852	380,983	22,908	261,248
1956	156	8,016	4,021	395,251	2,579	240,660
1957		11,090		656,000		437,000

(1) In 1951 including the members of the family.

Yields in the UAC and individual farms
(in centners per hectare)

Table 36

	1953		1956	
	UAC of types III & IV	Individual farms	UAC of types III & IV	Individual farms
wheat	20.1	20.8	23.0	19.7
rye	17.8	17.9	21.6	19.9
barley	19.1	18.3	22.1	20.0
sugar beets	233.1	251.8	203.9	214.7
potatoes	113.5	171.3	148.2	159.1
flax	19.2	14.9	28.3	25.7

Livestock belonging to the UAC of types III and IV
(by end of the year)

Table 37

	cattle		pigs		sheep	
	in thousands	in % of the total	in thousands	in % of the total	in thousands	in % to the total
1951	363.3	8.3	307.9	7.2	95.0	11.9
1953	916.0	22.4	970.3	23.1	260.4	26.0
1956	978.3	23.6	1,265.9	23.6	314.4	33.2

Table 38

Yields of the most important agricultural crops; average for the country in centners per hectare (actually harvested)

	1938	1948	1953	1956
wheat	20.5	16.4	20.8	21.3
rye	18.9	15.5	17.9	20.4
barley	20.2	15.4	19.2	21.1
potatoes	131.9	110.1	152.6	152.9
sugar beets	283.7	235.8	241.1	206.7

Table 39

Livestock and poultry (in thousands)

	cattle	of this, cows	pigs	sheep	poultry
1937	4,706	2,448	3,538	534	
1948	3,663	1,871	3,242	459	16,393
1953	4,082	2,152	4,174	1,017	21,094
1956	4,134	2,071	5,369	956	23,876
1957	4,091	2,066	5,435	889	24,250

Contest for a Popular olitical Economy Textbook

The Institute of Economics of the USSR Academy of Sci-ces and the Publishing House for Socio-economic Litera-re announce a competition for a popular text-book on polit-al economy. The aim of the competition is to render possi-e creation of a popular text-book presenting basic Marx-t-Leninist economic theory in concise and effective form. onditions for the competition are as follows:

1) The text-book should have in view broad strata of party, ade union and komsomol activists, the city and village in-lligentsia engaged in studying political economy in circles, hools of economics or through independent reading, and so students in special secondary schools.

2) The text-book should not exceed 320 printed pages (20 lios) in length, not less than half to be devoted to the polit-al economy of socialism.

3) Both individual authors and authors' collectives may ke part in the competition.

4) Not later than August 15, 1958 those taking part in the mpetition shall submit a detailed outline for a popular xt-book on political economy not exceeding 16 printed ges in length.

5) Considered as contestants shall be authors and authors' llectives submitting outlines which fulfill the basic re-irements of the competition. The decision of the jury on lmittance to the competititon shall be communicated to the blishing house.

6) The outlines shall be sent to SOTZECGIZ, (Moscow, - 71, Lenin Prospect, 15) in an envelope bearing the thor's code symbol. These are to be accompanied by a aled envelope enclosing the key to the author's code sym-l giving his first name, patronymic and surname, as well his address in full.

Two typed copies of the manuscript shall be delivered to OTZECGIZ by May 31, 1959, not carrying the author's me but with a new code symbol.

Together with the manuscript of the textbook, the author members of the authors' collective, shall enclose the llowing information: surname, first name, patronymic, resent employment, profession and address.

The package with the outline or manuscript sent to OTZECGIZ shall be marked: "For the Competition."

8) The Institute of Economics of the USSR Academy of iences and SOTZECGIZ shall constitute the jury for pass-g on the manuscripts of the text-books submitted to the mpetition.

9) The jury shall open the packages containing the key to e code symbols after the prizes have been awarded.

10) The following prizes shall be awarded for the best xt-books entered in the competition:

First prize	50,000	rubles
Second prize	35,000	"
Third prize	20,000	"
Three prizes, each	10,000	"

11) The jury shall be authorized to abstain from award-g any first prize in the event that there proves to be no anuscript meriting it.

12) Members of the jury shall not take part in the competition, shall not comment on terms of the competition and shall not engage in discussion of the competition with any of the contestants.

13) The results of the competition shall be published in the periodical press.

14) Payment of the award shall be made soon after the results of the competition are published in the press.

15) SOTZECGIZ shall enter into a contract with the author of the text-book which has been recommended for publication, paying the maximum provided for in the decision of the SNK of the RSFSR, of July 12, 1944 (No. 540).

On the title page of the award-winning text-book shall be inscribed the following: "Awarded the prize in the competition sponsored by the Institute of Economics of the USSR Academy of Sciences and SOTZECGIZ."

16) On the recommendation of the jury, SOTZECGIZ is authorized to use the most successful sections and chapters from other manuscripts entered in the competition, for inclusion in the prize-winning text-book. In this event, the authors of these sections or chapters shall have the status of co-authors of the text-book which will be published, and be given contracts on the same terms as the other author or authors of the text-book.

17) At the conclusion of the competition, one copy of the manuscript shall be returned to the author, the second, retained in the files of the competition jury.

A. Margolin:

The Complex Problem of the Amur and Soviet-Chinese Scientific Collaboration

In recent years the complex problem of harnessing the waters of the Amur River has assumed major importance, including the question of utilizing hydro-power and local fuel resources through construction of hydro and thermo-electric stations; also through further developing Pre-Amur industry, including multiple exploitation of the valuable minerals in the territory of the river basin, and expansion of the local food base. Also of exceptional importance is the struggle against the frequent flooding of the Pre-Amur lands, inflicting an immense amount of damage on the economy of the region and its population.

About 54% of the territory of the Amur basin is located in the USSR, and about 46% in the Chinese Peoples Republic, so that solving these problems is of mutual concern. The north-eastern provinces of the CPR, which lie in the Amur basin (in Chinese the Amur is known as the Cheiluntsiang— "The River of the Black Dragon") possess tremendous resources of raw materials which have not yet been adequately studied. In Cheiluntsiang Province there are millions of hectares of virgin lands. All the preconditions are present for joint study and exploitation of the natural resources of the Amur region and trasformation of the Amur into a true river of friendship binding two great nations.

In the summer of 1956 an agreement was concluded providing for the joint study of the Amur Basin by Soviet and Chinese organizations. The governments of the USSR and the

CPR agreed as well to joint research projects directed towards drawing up plans for the complex exploitation of the Argun River and upper reaches of the Amur.

In the agreement major attention was focussed on conducting economic investigation. The program provided for the study of the present condition of the national economy in the Soviet and Chinese Amur regions, and for drawing up a preliminary project for its development, (with top priority assigned to production of electric power capacity, to agriculture and transportation). Economists from both countries are jointly drawing up tentative estimates for the expenditure of materials and labor needed for solving the complex Amur problem, and are laying the basis for distributing the outlay among the individual branches of the water economy complex. Following the general conclusions arrived at by the Chinese and the Soviet experts in the course of their investigations, an economic evaluation will be made of the results awaited from exploiting the water and other resources and developing the productive forces in the Amur basin.

During the past year and a half, the USSR Academy of Sciences and that of the CPR, organized a complex Amur expedition, creating a unified organization on the basis of equal participation by Soviet and Chinese scientific workers. In order to develop a better understanding of the objectives of the investigation, as well as of the methods and goal of the scientific activities that were involved, and also for purposes of consultation, the members of each of the expeditions travelled to the other's territory, exchanging research materials, scientific reports and other information on a reciprocal basis. A United Scientific Council for both expeditions was created in order to provide unified scientific and methodological direction.

Joint field explorations of the Soviet Amur and the Chinese Cheiluntsiang were initiated in the summer of 1956. The expedition of the Academy of Sciences of the CPR was headed by Deputy Minister of irrigation and electric energy, Prof. Fen Tszhung-Yung. Among the noted Chinese scientists and specialists participating were Prof. Chu Tsui-fang, Sun Da-Chon, Chu De-Fin, and Su Tsya-tse. The Soviet expedition included the following corresponding members of the Academy of Sciences of the USSR; L. V. Pustovalov, V. A. Kovda, V. V. Zvonkov, N. N. Nekrasov, Doctor of Science S. V. Klopov (director of the expedition), V. T. Buikov and a number of other scientists. The all-over scientific direction of the expedition was carried on by the President of the Council for Productive Forces (SOPS) of the Academy of Sciences of the USSR, Academician V. S. Nemchinov, and as deputy, Prof. Chu Kei-Chen, head of the Commission for complex investigation expeditions of the Academy of Sciences of the CPR.

At the present time a group of the economic problems occupying the Amur expedition of the Academy of Sciences of the USSR are receiving preliminary definition. The questions at the center of economic investigation are those of the struggle against inundation, hydroelectric power production and improvement of river transportation. Another object of investigation is the current situation and perspectives for growth of the electric power supply and the consumption of energy in the Amur Basin. The general features of the principal projects for supplying energy to the southern part of Chitinsk oblast (bordering on the Argun), to Amur oblast, and the Khabarovsk and Maritime regions have already been outlined.

The economic evaluation of the effectiveness of measures for the struggle against inundation is of very great significance. In connection with the distribution of complex capital investment in hydroelectric projects it allows a specified portion of the outlay (in some cases up to 40%) to be provisionally allocated to measures for the struggle against inundation, and at the same time makes it possible to reduce the expenditures for hydro-construction and transportation. It is also important to establish the geographical distribution of losses caused by inundation in the river basin and the sections along the most important rivers, as a basis for determining the sequence of future reservoir construction.

Another subject for investigation is the economic consequences that would result from submerging inhabited points, as well as the flooding of farm, forest and pasturelands through the construction of the reservoirs indispensab for lessening or completely eliminating the destructive forc of the floods. The work of economic calculations in relation to reservoir construction has already been completed for 35 projects. The leading planning institutes are occupied at the present time with work on the economic basing of the plan for utilization of the water resources of the individual rivers of the Basin, or of the major sections of the rivers. This work is being carried out both in cooperation with the survey organized by the CPR, and also separately, by Soviet project institutes (Lengidroenergoproyect and others).

An important place in this research activity is occupied by the technical-economic evaluation of perspectives for exploiting the untapped mineral and forest resources of the Pre-Amur area. In addition to the Council for the Study of Productive Forces of the USSR Academy of Sciences, a number of scientific and project institutes are taking an active part in the work. Most important are the investigations devoted to the problem of the location and the capacity and type of ferrous metallurgical plants for the eastern Baikal regions, (including the Pre-Amur region), and to studying the efficiency of electric smelting processes for ferrous metals in the Pre-Amur, as well as the perspective for the development of an electro-chemical industry in the Pre-Amur, etc.

At the end of 1957, the economic councils of the economic administration of the Pre-Amur Region were drawn into the research being conducted by the Amur expedition. Agreements were concluded between the Amur, Khabarovsk and Pre-Amur Economic Councils and the USSR Academy of Sciences Council for the Study of Productive Forces, calling for scientific and production cooperation. The economic councils pledged that in the course of 1958-1959 they would prepare technical reports on perspectives for the development of various branches of industry in the next 15-20 years. The Council for the Study of Productive Forces of the USSR Academy of Sciences is to render systematic aid to the economic councils, allotting highly qualified consultants to specific branches of the economy, to inspect the program for the technico-economic reports which are to be drawn up, and take part in coordinating the various branches of activity.

In respect to the perspective of hydro-energy construction and the necessity to give top priority to the exploitation of the lumber resources connected with the reservoirs to be built in the future, a new approach must be found to making decisions in regard to the aims involved in the location of logging and woodworking enterprises. The Lumber Institute of the USSR Academy of Sciences and the specialized project institute have submitted proposals for more rational planning in locating the lumber industry, and for the sound treatment of the lumber economy in the Pre-Amur regions.

One of the most important tasks, is also to work out a scientific basis for drawing up a plan for utilizing the Amur and its tributaries for purposes of transportation. A paralle

udy is being made of the technical feasibility and economm- expediency of the construction of a number of new artiial waterways. In 1958 a number of variants were proted for new surface routes communicating with the Premur area, and also the reconstruction of existing railroads nd highways.

It is essential that a group of agricultural scientists prere material on the natural and economic division of the re-Amur into regions, in addition to working out preliminry indices for the perspectives for development of local griculture on a scale that will make it possible to meet the eeds of the Far East in full — for grain, vegetables and e products of the stock-raising industry.

As the economic investigations now in progress come to ompletion and are synthesized, there emerges a composite ypothesis for the perspectives for industrio-energetic evelopment of Pre-Amur hydroelectric projects — on the eisk, the Upper Amur, the Central Amur and at other oints. This work will be carried out under the direction of . N. Nekrasov, corresponding member of the USSR Acadey of Sciences.

Economic research into the Amur problem is being caried on both on a separate basis, and by joint Chinese and oviet expeditions. An interchange of programs, reports nd knowledge of the work in hand is also taking place, owever, in respect to the separate studies each of the two ountries is making of problems of the growth of the econmy within their own territory. For several years the Soiet-Chinese economic groups have been working on a joint tudy of the perspectives for the growth of the energy supply nd electric power consumption. In connection with the rontier rivers —the Argun and the Amur — problems reating to the economic evaluation of measures for the strugle against inundation have been the subject of collective nvestigation, with Chinese and Soviet economists drawing p reports on the necessary expenditure for the construcion of reservoirs. On the basis of the joint activities of ransport-economic brigades, proposals have been worked ut on the utilization of the Argun and Upper Amur, to be oordinated with projects for construction of new road ommunications, bridge crossings, etc.

In the summer of 1957, a mixed brigade of Chinese and oviet scientists travelled the major industrial and adminstrative centers of the Soviet Pre-Amur area, and to the rovince of Cheiluntsiang. The brigade, which was led by cademician V. S. Nemchinov and the vice-president of he Academy of Sciences of the CPR, Prof. Chou Kei-Chen, ncluded Chinese and Soviet scientists, the heads of project rganizations. The members of the brigade visited the ities of Blagoveschensk, Khabarovsk, Raichkhinsk, Komomolsk, Vladivostok, Voroshilov, Tsyamusi and Harbin, naking stops at a number of industrial enterprises and onstruction sites, studying the status of the work being arried on in the scientific research institutes of those reions, and establishing living ties with the leading organizaions of the Soviet Pre-Amur area, and of the Province of heiluntsiang, holding discussions with them on the results f the investigations that had been carried on, and on plans or further activities. During the period covered by the oint journey two scientific conferences were held.

Still another form of cooperation is the United Scientific ouncil for the Amur and Cheiluntsiang expedition. The rst session of the scientific council was held in March of 957, at Moscow; the second, in March of this year, at eking.

A delegation from the USSR Academy of Sciences, headed y Academician V. S. Nemchinov, took part in the work of he conference, where the total results of the 1957 joint investigations were summed up. During the year, the development of preliminary proposals for the project for the complex utilization of the Amur River and its major tributaries was carried to a conclusion; the basic features of the geologic structure of the western slopes of the Great Khingan mountain range, of the Lesser Khingan range and also of a number of other regions in which a variety of valuable minerals have been detected, were brought to light; the character of the natural conditions prevailing over a large section of the basin of the Middle Amur was determined; and research was conducted envisaging a rational plan of development of water and road communications related to the Argun and the upper reaches of the Amur River.

At the conference an expanded plan for joint activities to be carried on by the Cheiluntsiang and Amur expeditions in 1958 was adopted.

To develop scientific communication, and a methodical exchange of experiences and the mutual study of the results of the work of each side, journeys by scientists to the scientific centers of the USSR and the CPR were widely practiced. Not long ago the USSR played host to a group of Chinese economists and geographers — members of the Cheiluntsiang expedition — headed by the president of the planning committee of Cheiluntsiang Province, Comrade Shen Chao-jen. The Chinese economists and geographers familiarized themselves with the direction, methods and content of the research carried on in the section of the Institute of Economics of the USSR Academy of Sciences for the locating of socialist production; the economic geography section of the Geographic Institute of the USSR Academy of Sciences; and also with the work of the Moscow and Leningrad planning commissions; also various sectors and expeditions of the Council for the Study of Productive Forces of the USSR Academy of Sciences, and other scientific and educational institutions. A journey of Soviet economists to scientific centers of the CPR is planned for the near future.

Soviet-Chinese scientific collaboration acts as a summons to both great nations to study and gain mastery over the natural resources, to develop the productive forces of the Soviet Pre-Amur and of northeastern China. The goal of this friendly collaboration, as the Chinese comrades put it, is to transform, through our joint efforts, the "River of the Black Dragon" into "The River of the Electric Dragon."

In the Institute of Economics, Academy of Sciences, Kazakh SSR

Since the reorganization of the section on industry and construction of the Kazakh SSR Academy of Sciences, its major efforts have been directed towards working out perspectives for a plan for the development and the location of the various branches of the economy. In this context, it was held essential to achieve maximum employment of available materials and natural resources of the reserves of production, as well as a further expansion of specialization and cooperation, and of effective production connections in the inter-regional division of labor.

Last year research was carried on into the problem of "Measures for Raising Labor Productivity and Lowering Production Costs in Various Branches of Kazakhstan Industry," in the course of which a study was made of the questions relating to the effectiveness of new techniques, of advanced technological processes and of the organization of labor; also of the economic efficiency of capital invest-

ment in various branches of industry in the republic. In connection with the problem of "The Perspective for the Growth of the Various Branches of the National Economy of Kazakhstan and its Individual Economic Regions," an investigation was carried on into the perspectives for development of such leading branches of industry in the Kazakh SSR as ferrous and non-ferrous metallurgy, machine-building, the building materials industry, light industry and the food industry and others. The problem of "The History of the National Economy and the Economic Development of Soviet Kazakhstan" has been treated in a number of works on the history of Kazakhstan's national economy during the period of the Revolution and the reconstruction period. In addition, material has been collected on the history of economic thought in Kazakhstan in the 19th century, and a study made of the specific features of the transition of Kazakhstan from a semi-feudal colonial economy to a socialist economy.

On the basis of the work done by a collective of the Institute a number of proposals were submitted to the GOSPLAN of the Kazakh SSR relating to the further growth and allocation of the various branches of the republic's national economy. Many of these proposals were utilized in working out the economic plan for development of the Kazakh SSR for the 1959-1965 period. The GOSPLAN of the Kazakh SSR accorded positive evaluation to the work carried out by the Institute on the characteristics of the situation and perspectives for growth in regard to the production of binding for construction materials and reed fiber slabs. A picture of the untapped resources which existed was presented to the planning organization with a brief characterization of the valuable minerals of local origin, also regions where cement plants should be located were specified, etc. The evaluation given by the Institute in regard to the situation obtaining in the building materials industry, pointing out the perspectives for development of its individual branches, laid the foundation for the location of enterprises for manufacturing building materials.

Research has also been carried on into the problems involved in specialization and cooperation in the production of metal articles and instruments in the Kazakhstan machine-building industry. The data presented by the Institute relating to Kazakhstan's requirements in regard to reinforcing components and instruments may be used as the basis for technical plans for factories and shops assigned to specialization in the production of these components. Reports indicated that as a result of the specialized production of reinforcing components and instruments, the outlay for meeting the requirements of the national economy of Kazakhstan for these articles was cut by 19 million rubles annually.

A proposal by the Institute relating to questions of new railroad construction in Kazakhstan for the 1959-1965 period, is of practical interest. The project for railroad construction not only takes into account the special features involved in the tempestuous rate of growth of the basic branches of the republic's national economy (coal, metallurgy, chemicals and agriculture) but also provides for a basic improvement in the geographical distribution of the railway network. The project also provides for the creation of new railroads to strengthen connections between Kazakhstan and the other areas of the USSR.

Proposals worked out by the Institute, in the course of research into individual problems relating to the economic status of various enterprises also merit attention. Thus, in the coal mines of Djezkazgan, major measures in the field of the mechanization of labor, of the organization of production, labor and wages were settled on as opening up possibilities for an increase in labor productivity, with special emphasis on a rational form of specialization by the workers in a brigade. In the course of studying lead production, an economic basis was arrived at for two methods of lead refining. This indicated the expediency of adopting the liquid alkaline pig-iron reduction process.

The Institute has completed a work on the history of the national economy of Kazakhstan in the period of the Great October Revolution and the reconstruction period. Preparations have been made for an extensive monograph on the "Socio-economic Status of the Kazakh Nomads in the 15th-18th Centuries, and its Progressive Modification in Connection with their Voluntary Union with Russia." A portion of the research for this work has been published.

Co-workers in the Institute have given reports and lectured at a number of meetings and conferences. Thus, at the All-Union Scientific-technical Conference on the employment of rushes in construction, A. Chugai reported on the theme of "The Economics of the Rush Industry." At the All-Union Scientific Conference on problems of research into the calculation of labor productivity in agriculture, S. Burbayev reported on "Growing Underbrush and Fattening Cattle in the State Grain Farms of Kazakhstan." A. Osorgin spoke at the All-Union Conference that was devoted to research on a regional complex of problems, on the subject of "The Normative Optimum Length of Highways and Connecting Local Roads under Conditions Arising from Various Economic Complexes." Co-workers of the Institute also took active part in the joint scientific meetings on problems of the Turgaisk economic complex.

In the Institute's 1959-1965 research program, provision is made for an expansion of research into the most immediate problems of today. Thus, for example, in connection with problems of "The Perspectives for Development of the Various Branches of the National Economy of Kazakhstan and its Individual Economic Regions," a complex study is projected of questions involved in the growth of the productive forces of the Kustanaisk and Karaganda economic administrative regions. On the basis of an investigation into the factual production situation, taking into account all of the natural and the economic factors, the perspectives for the development of the individual branches of the economy of these regions for the coming 10-15 year period will be determined. Also problems will be examined relating to the organization of suburban farming in the environs of industrial centers, in order to provide the population with potatoes, vegetables, milk and other products.

On the problem of "The Road to Higher Labor Productivity and Lower Production Costs in Various Branches of Kazakhstan's National Economy," a plan was projected for working out recommendations for raising the efficiency of new techniques in the copper mines at Djezkazgan, for determining the economic effectiveness of a number of systems of mining at the non-ferrous ore mines, as well as methods for utilizing the reserves of the growth of labor productivity at Kazakhstan's lead plants.

In 1959 the Institute is starting work on the problems of the "Expansion of the Reproduction of Labor Power and Skilled Cadres for the Various Branches of the Kazakhstan Economy." Using materials from the Kazakh SSR, the plan is to examine the basic law of the expansion of the reproduction of labor power and of skilled cadres; also the operation of the socialist law of population, the composition, growth and utilization of the labor resources of the republic.

As regards the work of the section on the political economy of socialism, in 1959 there should be completed and ready to go to press an investigation into "The Special Features of the Transition of Kazakhstan from a Semi-feudal Colonial Economic Structure to a Socialist One."

n the problem of "The History of Kazakhstan's Economy and conomic Thought," a study is to be made of questions relating o the economy of Kazakhstan during the pre-war Five-Year lan, and during the Great Patriotic War and the postwar period. The plan is for essays on the above themes, based on results of the study, to be prepared for publication. Another project is preparation of a monograph on the history of economic thought in Kazakhstan in the pre-revolutionary and the Soviet periods.

G. KOLMEY (Continued From Page 45)

FOOTNOTES

(1) Including 1.1 million in the democratic sector of Great- r Berlin.
(2) Including 2.3 million of Western Berlin, but not includ- ng 1 million people in the Saar region.
(3) Basic materials industry includes: fuel-energetic, min- ng, metallurgy, the chemical industry and the production of uilding materials.
(4) The industrial production of Berlin is considered by ectors, and these data are included in the indices for the DR and the FRG.
(5) Specific weights of output of copper, production of non- errous metals, mineral fertilizers and plastics are calcu- ated in price indices; specific weight of production of elec- ric energy is calculated by natural volume (1939) and does ot include data for Berlin; the index on liquid fuel does not nclude data for Berlin.
(6) Without the Saar region.
(7) Without the Saar region.
(8) Including automobiles, ships and aircraft.
(9) Production in Berlin not included, for there were no data per sectors.
(10) Only socialist enterprises (without construction).
(11) Per person occupied in industry (excluding construction and electric energy).
(12) "Political Economy." A textbook, Second edition, p. 540.
(13) Without intra-German trade.
(14) Preliminary data.
(15) 1928-1936 — USSR, Lithuania, Latvia, Estonia.
(16) In prices of the domestic market, including intra-German trade.
(17) Foreign trade prices, excluding intra-German trade.
(18) 1950; number of population as of 9/13/1950.

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